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OPA Gives New Paper Board Determinations

New Definite Rules Are Issued By Which Manufacturers of Paper Board May Figure Prices—Level of Quotations Based On October 1941 Prices Is Unchanged — Fiber Drums Are Now Included.

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., October 27, 1943—How manufacturers of paper board containers, cartons, boxes and other receptacles determine their ceilings, particularly for new products, was made explicit by the Office of Price Administration today in a revision of the maximum price regulation covering certain paper board products.

No change in the manufacturers' level of prices will result from today's action, as ceilings continue to be based on October 1941 pricing formulas and price lists.

Corrugated and solid fiber containers; folding cartons; set-up boxes; tubes, cores and cans, and fiber drums and pails, the annual sales value of which aggregate $850,000,000, are covered by this revised regulation. The industry was consulted before the changes were made.

Manufacturers generally determine their ceilings by computing the sum of raw material costs, conversion charges, margins and charges for delivery. Price lists in effect in October 1941 may be used instead of the formula method, provided the lists are used in their entirety. Today's changes in the formula procedures follow:

Freezes Raw Material Costs

1. Raw material costs. To discourage the substitution of high cost materials for materials regularly used, the revised regulation requires manufacturers to absorb any raw material cost increases over the cost of materials usually employed. If substitutions are necessary, however, to meet specifications required by Government contracts or subcontracts, or War Production Board certification, the actual cost of the substitutions may be included regardless of the relationship to materials regularly used. Since April 1, 1943, raw material costs for manufacturers of these paper board products have been frozen at levels no higher than the maximum prices in effect for the raw materials on March 31, 1943. This freeze will remain in effect until January 1, 1944, unless revoked, further extended, made permanent or otherwise changed before then.

2. Conversion charges. Conversion charges for services or commodities not sold during the October 1941 base period but which are made by the manufacturers' same equipment and methods as employed during October 1941 must not be in excess of the conversion charges for the same or comparable service or commodity during the base period. Where there is a change to new equipment and operations, on which a maximum price had not previously been established the manufacturer must apply to OPA for approval of the conversion charges to be used.

Expands Margin Provisions

3. Margin. The entire margin provisions have been reworded and expanded to outline in detail what margins may be applied on the four types of sales that may be made by a manufacturer, as follows: (a) On sales of identical commodities to the same customers to whom they were sold in October 1941, the base period margins must be maintained; commodities are considered identical even if there is a change in color of ink or a change in the printing on the article. (b) On sales of a commodity to a purchaser who had not purchased the same commodity from that company during October 1941 but had purchased other commodities, the margin used cannot exceed that employed during October 1941 in pricing the most comparable commodity sold to that purchaser. (c) On sales of a commodity to a purchaser to whom no sales had been made during October 1941, the margin used cannot exceed that employed during October 1941 in pricing the most comparable commodity sold to the purchaser most closely resembling the new purchaser. (d) On sales of a new commodity not made before by either a new or old manufacturer, the manufacturer must file an application for approval of margins with OPA. The intent in all cases is to hold margins to October 1941 levels.

Rules on Delivery Charges

4. Charges for delivery. In cases where special shipments are required by a purchaser in order to fulfill a Government contract or subcontract, the extra delivery charges, if approved by the purchaser, can be added to the maximum price.

Mills Hold Two-Day Regional Conference

Paper and Pulp Producers of Three States Are Present At Meeting Called By WPB At Green Bay, Wis.—A. B. Hansen of Northern Paper Mills Heads New Pulp Production Section — Other News.

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., October 25, 1943—Practically every paper and pulp mill in Wisconsin, Minnesota and upper Michigan was represented at a two-day regional conference conducted by the War Production Board at Green Bay, Wis. Friday and Saturday of last week. It was the first of a series of six regional meetings planned by A. B. Hansen, president of the Northern Paper Mills, Green Bay, and now in charge of the new pulp production section of WPB.

Mr. Hansen's aide for the Lake States region is Frank Kelley, vice-president in charge of woods operations for the Northwest Paper Company, Cloquet, Minn. He was appointed last week, and will have his headquarters at Green Bay, where the regional WPB offices are located.

Appearing personally from Washington at the meeting of mill executives at Hotel Northland, Mr. Hansen declared that critically needed increases in production of pulpwood and paper are up to the mills to get, through local campaigns in every producing area. Full cooperation of the WPB in these local efforts can be expected through Mr. Kelley, he announced.

"The situation is serious," Mr. Hansen said. "We must get pulpwood production from every possible source, including the farmer and small timber owner. Personal contacts as well as publicity and advertising are necessary. We are working on the manpower problem, but right now I cannot promise that you will get it."

Newspapers, through the American Newspaper Publishers Association were credited by Frank Block, director of the war activities committee of Pulpwood Consuming Industries Association, with spending more money in local producing areas to induce pulpwood production than has been done by the industry itself. "Now is the time to correct this situation," he said, "and for the industry to put more into this effort."

Mr. Block presented an industry promotional campaign which appeals to labor on the grounds of essentiality, patriotism, profitability and draft deferment for full-time workers, and to farmers and other indirect sources of supply.

M. H. Collet of the WPB pulp production division at Washington, said $1,000,000 had been secured for the timber production war project, to be used to stimulate output, and to bring into the picture the manpower and expert talent of local forestry men, county agricultural agents and others.

Industries were instructed to supply Mr. Kelley's office with inventory, production, equipment and other essential data so coordination could be worked out to enable all mills to meet their requirements.

Hold Roundup for Pulpwood Drive

In order to focus attention on the need of pulpwood, a roundup was staged at Merrill, Wis., Saturday, October 23, under auspices of the Merrill Daily Herald, which is promoting more logging by farmers and woodlot owners in the Wisconsin River Valley. A parade was held, displays of wood products were arranged in the stores, and a speaking program was conducted at which prizes were awarded in an essay contest on pulpwood. Speakers included Frank Graass, executive secretary to Governor Walter S. Goodland; F. B. Trenk, forester for the extension division of the University of Wisconsin; Galen W. Pike, area forester; Judge Gerald Boileau of Wausau, Wis.; C. J. Brossard, president of the Civic and Commercial Club at Tomahaw, Wis., and Matthew Brossard, of the U. S. Office of Emergency Management. Executives of eight Wisconsin Valley paper mills were introduced.

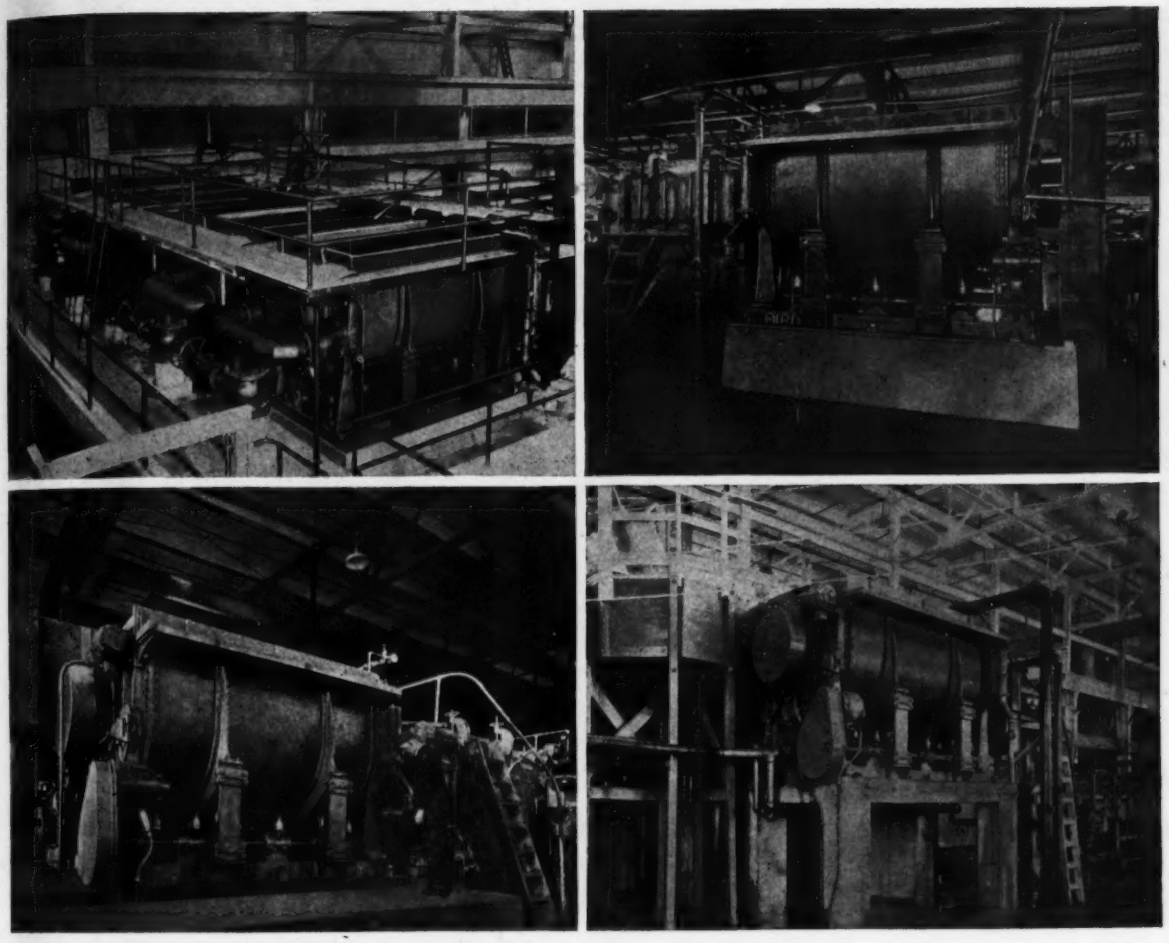
Another Wisconsin man who will have much to do with the pulpwood production program is Arthur G. Wakeman, former production manager of the Fox River Paper Corporation, Appleton, Wis. He has been serving as director of the pulp and paper division of WPB but in a realignment he has been appointed as assistant to Harold Boeschenstein, director of WPB's new forest products bureau. The shift involves re-designation of the commodities bureau as the forest products bureau, to which the lumber and lumber products division, under Director J. Philip Boyd, will be transferred. The change was made "to establish a closer coordination of the production of pulpwood with other forest products."

Cutting of a large quantity of pulpwood will be started soon by the Consolidated Water Power and Paper Company, Wisconsin Rapids, Wis., on a tract in the Glidden ranger district in sawyer County, Wis. Cutting rights have been obtained on a large strip of federal forest. Three camps will be built to accommodate the woodcutters. The company is building six miles of road in order to transport the timber to available fire lanes.

Spurs Waste Paper Salvage Plan

More activity also is being stirred up on the salvage drives for collection of waste paper, after it became known that some mills have had to suspend at times because of lack of supplies. A survey is being made by WPB of forty mills in the Chicago region which utilize waste paper, in order to ward off the possibility of further shutdowns. The investigation is under the direction of Earl N. Bauer, general salvage chief for the Chicago region. He announced that the national goal is 6,950,000 tons during 1943, but reported that the collections are falling short about 100,000 tons per month. Consuming mills are estimated to be 1,000,000 tons a year behind their requirements. Communities everywhere will be asked to cooperate to make the paper available to offset the pulpwood shortage.

At Appleton, Wis., the waste paper collection plan which was worked out sometime ago as a national pattern at the request of WPB will be revived. Boy Scouts will make the house-to-house collections, and authorized salvage dealers will make the truck pick-ups.



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Urge Pulpwood Be Declared Essential Work

Canadian Newspapers Advocate Government Take Prompt Steps To Divert Enough Labor To Woods To Prevent A Pulpwood Shortage — Star Strives To Impress Government of Need For Action.

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., October 25, 1943—Many newspapers throughout Canada have been urging the government to recognize the pulp and paper industry as an essential industry and to take immediate steps to divert to pulpwood cutting enough men to prevent the threatened shortage of pulp and newsprint from developing. Due to the fact that Montreal is the recognized business center of this industry and the headquarters of the Canadian Pulp and Paper Association the gravity of the situation is better understood here than in other places, and newspapers consequently are more outspoken on the subject. Thus the Montreal Gazette says:

"The crisis confronting the pulp and paper industry, because of the shortage of an estimated 20,000 men to cut wood this winter for next year's milling operations, is not only serious but so acutely imminent that immediate action is absolutely essential to avoid results of far reaching import.

"The industry has asked for 20,000 internees or prisoners of war to work in the bush, and clear decisive amendment of Selective Service regulations to induce farmers to resume their normal practice of cutting in the woods in the winter.

"As it is, the uncertainty and limitation of Selective Service rulings has kept many farmers and farm workers away from the woods for fear they would lose their exemption from military call-up. Definite rating of wood cutting as an essential industry, as has been done in the U.S., and an educational campaign to assure farmers they will continue to be protected from call-up while in the bush, would go far to resolve the looming crisis in an industry with a major role in the national economy.

"The government's reported plan to strengthen the manpower position of pulpwood production, by giving woods operations a Category B priority, appears to be a rather negative and quite incomplete solution of the serious shortage of labor to cut wood for the newsprint and other industries

"In the fact of estimates that up to 20,000 additional men are required in the woods this winter to cut wood for next year's operations of pulp, cellulose and newsprint mills, it hardly seems sufficient to freeze remaining woods workers in their positions, even if it does give the industry a priority standing. Nor does it seem clear-cut enough to overcome the reluctance of farmers and farm workers to go into the bush, because of fear they would lose deferment from military call-up."

Newspaper Urges Quick Action

The Montreal Star, which has the largest circulation of any English newspaper east of Toronto, has devoted a leading editorial to impressing upon the government the seriousness of the situation and of its implications in respect to the newspapers of the United States. In this editorial it says:

"More newspapers are being sold and read today in the free countries than ever before since the inventing of the printing press. In the United States alone newspaper circulation exceeds 43.3 millions a day, and more than forty per cent of all persons over ten years old buy newspapers. There is a greater demand upon their space than ever; indeed, today the daily newspaper is not only a necessity; it is an indispensable adjunct of the daily life of the free peoples everywhere.

"It is most unfortunate that, at a time when such extensive demands are being made upon newspapers, the supply of newsprint should be curtailed. Since the war began the volume of newsprint available for newspapers of the North American continent has been cut from 10 to 15%, while the price has been advanced several times. Now, according to a report made by a joint Anglo-American-Canadian committee which recently investigated the pulp and paper situation, there is a prospect that newsprint supplies may be reduced in 1944 from 20 to 52% from this year's level unless a large supply of pulpwood is secured.

"The main source of pulpwood for North America is the Canadian forest. It is estimated that the total for the North American continent will be 17,500,000 cords for 1944, as compared with 23,600,000 cords in the current year. The explanation is a simple one. A large number of these woodcutters work on the farms in the summer. As farmers they are exempt from military service, but until quite recently there was no such exemption in the case of woodcutters, although cutting pulpwood is just as essential an industry as farming. Following representations made to the government by the newspaper industry, however, a circular was recently issued by the Department of National Selective Service to all farmers, stating that if they were not needed on the farm they could go and work in any essential industry, including the cutting of pulpwood, which would give them the same exempt status as farming.

"There is, despite this, still a shortage of men, and unless that situation is rectified newspapers will suffer from the handicap of insufficient newsprint. It is a serious matter, and one which should command the close attention of the Selective Service department with a view to immediate amelioration. There has been a suggestion in the United States that prisoners of war should be employed for woodcutting. We do not believe, however, that this would prove any solution, because under the Berne conventions prisoners of war cannot be compelled to do any work they refuse to do. But the government might make use of draftees for temporary relief of the manpower shortage in the woods. Out of the large number of draftees from rural districts there must be a considerable proportion who would be competent to do a good job of cutting pulpwood. It is a healthy occupation, and the diversion of a number of draftees into it would not in any way endanger any Canadian interests. We commend this suggestion to the consideration of General LaFleche (Minister of National War Services) and his advisers."

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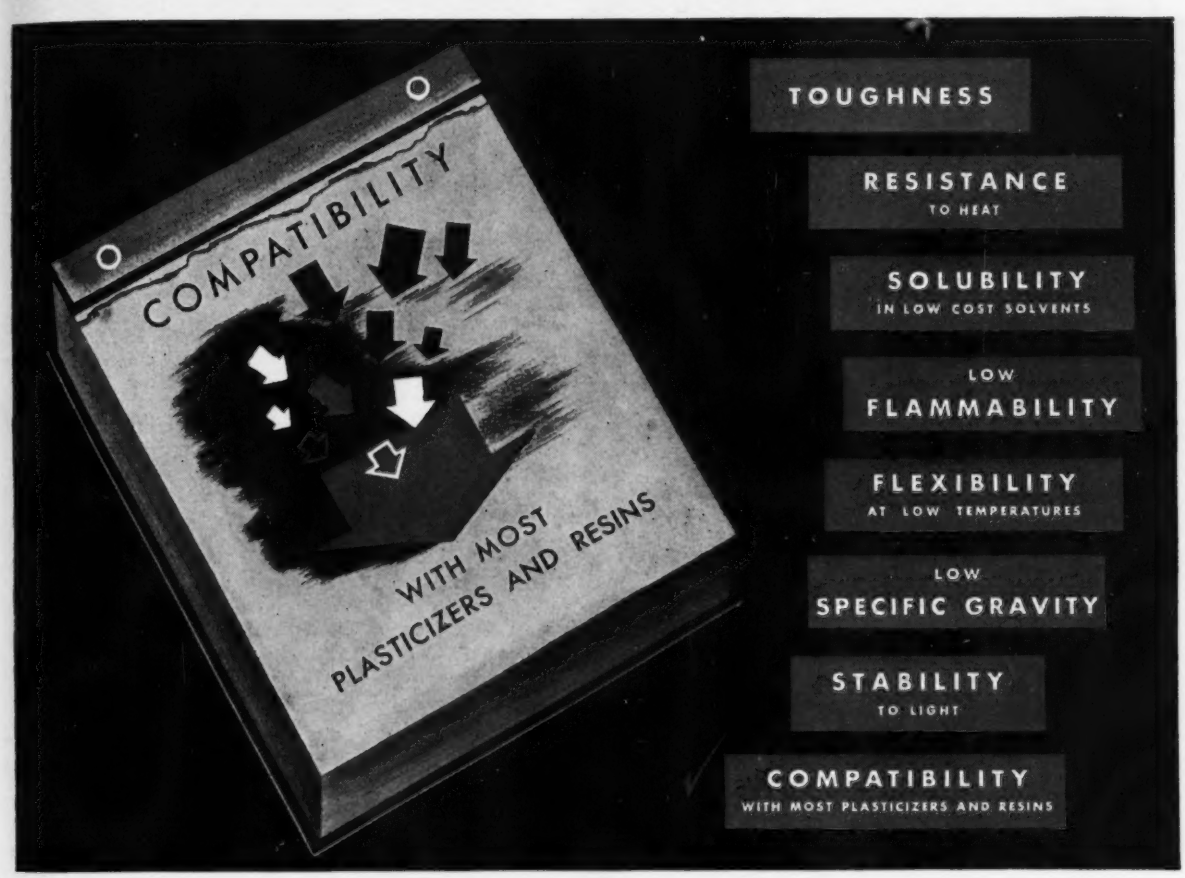

The strength that comes from the union of strong forces is what makes the might of the Allies. It is not too far-fetched to use this analogy when speaking of ETHOCEL. For, in addition to possessing the important characteristics listed above, ETHOCEL may be readily combined with other materials and imparts these characteristics to them.

For example: ETHOCEL can add toughness, or flexibility, or other qualities to formulations of spirit varnishes, nitrocellulose lacquers and even wax compositions.

ETHOCEL is completely compatible with pure and modified phenolics, making possible the production of lacquer type coatings from resins commonly considered suitable for use only in oleoresinous varnishes. It is also compatible with rosin, rosin esters, long oil alkyds, certain of the natural resins, nitrocellulose, and, in proper proportions, with coumarone-indenes, urea and maleic resins, and acrylic esters. Adding ETHOCEL to compositions containing these resins reduces tack, increases block resistance, and gives greater cohesion to the film.

These qualities have created a great demand for ETHOCEL in war use. These attributes point out its future uses as well. Make a note of ETHOCEL'S compatibility—it may stand you in good stead when ETHOCEL is again available in quantity.

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CHEMICALS INDISPENSABLE TO INDUSTRY AND VICTORY

WPB Announces Divisional Changes

Realignment of the War Production Board Divisions handling lumber, wood pulp, paper and paper products has been announced by operations Vice Chairman H. G. Batcheller.

The shift will involve the re-designation of the Commodities Bureau as the Forest Products Bureau, to which the Lumber and Lumber Products Division, under Director Philip J. Boyd, will be transferred. The Lumber and Lumber Products Division formerly was part of the Construction and Utilities Bureau.

The shift of the Lumber Division, Mr. Batcheller explained, is being made to establish a closer coordination of the production of pulpwood with other forest products. The new bureau, organized under the direction of Harold Boeschenstein, forms part of a broad WPB program for increasing production of wood pulp, paper, and paper products, and controlling their distribution for essential purposes.

The Pulp and Paper Division is replaced by two separate divisions, the Paper Division and the Paperboard Division. Arthur G. Wakeman, who had been director of the Pulp and Paper Division, becomes Mr. Boeschenstein's assistant.

Agner B. Hansen, formerly Deputy Director of the Pulp and Paper Division, will be in charge of the pulp production function, reporting directly to Mr. Boeschenstein.

Pulp allocation under David Graham, formerly Chief of the Fibrous Materials Section of the Pulp and Paper Division, includes maintenance of records and statistics on pulpwood and pulp production, and paper stocks.

The Paper Division, which will have Rex Hovey, on leave of absence as Executive Vice President of the Oxford Paper Company, New York, N. Y., as its Director, will handle all paper and converted paper products.

The Paperboard Division will handle problems concerning kraft paperboard and boxboard, solid fiber containers, corrugated board containers, and folding and set-up boxes. The Paperboard Division takes over kraft, jute and all other types of container and boxboards as well as paperboard cartons and boxes previously handled by the Containers Division. It will be headed by G. G. Otto, President of the Alton Boxboard Company, of Alton, Illinois, who is taking a leave of absence from that organization in order to assume the post with WPB.

The Containers Division will continue to function under its present Director, E. F. Tomiska, with respect to other than paper and paperboard containers, and the Printing and Publishing Division will continue under Harry M. Bitner, as part of the new Bureau.

Cuts Printing Paper 5 Per Cent

WASHINGTON, D. C., October 27, 1943—A further restriction on the use of paper for commercial printing purposes amounting to 5% was authorized today through the issuance of an amendment to WPB Commercial Printing Limitation Order L-241. The amendment is effective during the fourth quarter of 1943, the Printing and Publishing Division stated, and makes the total curtailment of commercial printers' paper usage 15% below the use during the base year 1941.

The order also restricts the weight of paper which may be used for certain purposes such as diaries, date books, accounting records, letterheads, general business, financial, legal forms, etc.

The amount of paper on a percentage basis which may be employed in certain end uses including the manufacture of catalogues, directories (except telephone directories), and shopping and free distribution newspapers is also limited. Books, magazines, newspapers, greeting and illustrated post cards, displays, wall paper, boxes and certain converted products are restricted by other orders, it was pointed out, and are not affected by this order.

Commercial printers who do less than $1250.00 worth of business or who use less than 1¼ tons of paper per quarter, are exempt from restrictions imposed by Order L-241. According to the 1939 Bureau of Census figures, this will exempt approximately 15,000 small printing establishments.

The types of commercial printing covered by the amended order which are subject to exemption have been curtailed to some extent. The new order stipulates that only printing required by Federal, State, County and Municipal laws, ordinances and regulations, and certain other printing for Governmental accounts is exempt from the commercial printer's quota.

Specifically, the order operates on a quarterly basis, but a limit on the printer's use of paper amounting to 88¼% of the paper used in 1941 is imposed for the calendar year 1943. During the year 1944, however, and each year thereafter, a printer is limited to the use of 85% of the paper used by him in 1941.

Advocates New Newsprint Plan

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., October 27, 1943—The Newspaper Industry Advisory Committee recommended to the War Production Board that newsprint inventory reductions, rather than an immediate consumption cut in the midst of the fourth quarter, be utilized to meet the newsprint supply situation, N. M. Bitner presiding government officer, stated at the adjournment of the two-day session of the committee.

Specifically, the committee recommended that WPB not require a further reduction in the use of newsprint during the months of November and December, but reduce inventories approximately 40,000 tons per month. Part of the reduction, it was suggested, should be effected through revision of Order L-240, and part secured voluntarily from the larger newspapers. The total reduction would offset the estimated 16 per cent deficiency.

Mr. Bitner made it clear, however, that a substantial reduction in newsprint use next year seems inevitable.

In the event that reductions in inventories do not meet the 16% deficiency, either during the balance of 1943 or in 1944, a new formula or ratio of cuts was recommended on a sliding scale as follows: (quarterly)

Consumption	Reduction
First 25 tons ..... (No cut)	0%
Next 100 tons	2%
Next 125 tons	4%
Next 250 tons	6%
Next 500 tons	10%
Next 500 tons or above	12%

The Committee also recommended that the Printing and Publishing Division secure detailed data on monthly inventories of the larger newspapers and keep a careful check on supplies of newsprint.

AS YOU NEVER DROVE BEFORE!

Many a soldier owes his life to a commander who drove him to the utmost in battle—*never let him slacken for a single fatal instant!* And after the war, many a worker will owe his economic safety to a leader who drove him continuously for higher Pay-Roll allotments for the purchase of War Bonds!

Despite higher taxes and prices, the average worker still has more money than ever before—particularly on the basis of the *family* income. With others in the family earning, too, just let the worker 'figure it out for himself', and he usually will realize that *now* he can put more into War Bonds than he has been doing.

That's why the Treasury Department has set new quotas for the current Pay-Roll Allotment Drive—*quotas running about 50% above former figures.* These quotas are designed to reach the *new* money that's coming into the family income. Coming from millions of new workers . . . from women who never worked before . . . from millions who never before earned anything like what they are getting today!

The current War Bond effort is built around the *family* unit, and the Treasury Department now urges you to organize your War Bond *thinking*—and your War Bond *selling*—on the basis of your employees' *family* incomes. For details, get in touch with your local War Finance Committee which will supply you with all necessary material for the proper presentation of the new plan to your workers through your labor-management committees.

Today about 30,000,000 wage earners, in 175,000 plants, are buying War Bonds at the rate of nearly half a billion dollars a month. Great as this sum is, *it is not enough!* So turn-to today! Get this new *family income plan working!*

This Space Is a Contribution to America's All-Out War Effort By

PAPER TRADE JOURNAL

Paper Division of Jewish Charities Dines

More than 150 members of the pulp and paper industry were present at the annual dinner of the Pulp and Paper Division of the New York and Brooklyn Federations of Jewish Charities which was held Tuesday night, October 19, at the Hotel Biltmore, and pledged their full support to the 1943 Federation campaign.

William Mazer of the Hudson Paper Company, chairman of the Pulp and Paper Division, acted as toastmaster. Other speakers were William S. Gailmor, radio analyst and George Z. Medalie, president of the Federation.

Mr. Mazer stated, "The 1943 Federation campaign is of special importance to us, since this year Federation is seeking to raise a fund sufficiently large to safeguard its 116 health and welfare institutions against any emergency situation that may arise after the war. Our industry is well aware of the great service these institutions are rendering to the community and I expect that those who are not here will respond as well as the members present in the 1943 Fund-raising appeal."

Morris Gintzler, honorary chairman of the Pulp and Paper Division, expressed the hope that more than one fund-raising dinner on the part of the Pulp and Paper industry would be held this year.

Other committee members assisting Mr. Mazer in the 1943 Federation Fund-raising drive are Samuel J. Fishman, Finkel Paper Company; Heyman Schrier, Schrier Brothers; George Stoll, Reliance Paper and Twine Company; Joseph H. Simon, Ace Paper Company; Jack Weill, Mutual Paper Company; Samuel Wishnick, Park Tissue Mills, and Milton Collier, Pennsylvania Exchange Bank, treasurer. Morris Gintzler, Pulp and Paper Trading Company, is honorary chairman of the division.

Vice-chairmen of sub-divisions of the Pulp and Paper Division are: Bag Manufacturers: Benjamin Mintz, Trinity Bag and Paper Company, and William Salzman, Brooklyn Standard Bag Company; Cosmopolitan Twine and Paper Association; Bernard Marsh, Harlem Paper Company; Metropolitan Twine and Paper Association; Michael Posner, S. Posner Sons, Inc.; Paper and Bag Jobbers, Isaac Schrier, Schrier Brothers; Paper Box Division, Jacob S. Glekel, Eagle Paper and Twine Company; Specialtiy Paper Division A. R. Melker Company; Specialty Paper Bags Division; Irving Zucker, Oneida Paper Products, Inc.; Tissue Paper Mills; Isidor Baum, Ashland Paper Mills, and Victor Cohen, Park Tissue Mills; Twine Division; Charles G. Strisik, Empire Twine and Yarn Company; Wrapping Paper Jobbers: Robert J. Rodnick, Mutual Paper Co.

The dinner committee consists of: A. H. Cohen, Resolute Paper Products Corporation; Philip S. Elkins, Adams Paper and Twine Company; Bernard Feldman, Henry Fuchs & Son; Nathan Fisher; Sidney Fishman, Federal Paper Corporation; Bernard Friedlander, Capitol Folding Paper Box Company; Morris Gold, Southern Kraft Corporation; C. Goldstein, Alliance Paper and Twine Company; Morris Heller, Amsterdam Paper Company; Morris Housen, Erving Paper Mills; Moe Israel, City Cordage Company; Irving A. Jaffe, Jaffe Sales Corporation; David Kasson, Biltmore Paper Company; Morris Katz, Kary-Safe Paper Bag Company; Albert Newman, Newman-Kohn Paper Company; Julius Ratner, 'Alliance Paper and Twine Company; Maurice Relkin, Majestic Paper and Twine Company; Maurice Rosenfeld, Equitable Paper Bag Company; Fred Ruhling, Lily Tulip Cup Corporation; Abraham Sacks, Atlas Paper Products.

Also Charles H. Schaffer, Charles H. Schaffer Corporation; Sam Scheck, Scheck Brothers; David Schlanger, West Shore Twine and Paper Supply Corporation; Emanuel I. Schorsch, Schorsch Paper Prodcts Company; Meyer N. Schwartz, Harlem Paper Company; Bernard Sharp, Sharp Paper and Specialty Company; Benjamin I. Sheldon, Gottesman & Co.; David Usdan, Heller & Usden, Inc.; and Adolph Warshow, Majestic Paper Corporation.

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Army-Navy Celebration is Held at Fulton

[FROM OUR REGULAR CORRESPONDENT]

FULTON, N. Y., October 18, 1943—Celebration of Army-Navy Day at the Oswego Falls-Sealright Company plants here recently was highlighted by the appearance of a huge German army tank destroyer, which was captured in Sicily and is the only one of its type to be displayed in Upstate New York since its recent arrival in New York.

After a tour of the local firm's manufacturing plants by a military delegation of veteran service men under Maj. C. J. Bishop of the Army, representing the Undersecretary of War, and Lt. (j.g.) John C. Boeshaar of the Sampson Naval Training Station, more than 2,000 employees and guests gathered in the Container plant for a giant Army-Navy Rally.

They heard battle-front experiences described by several of the service men, including two former fellow-employees, Pt. Walter Breen, wounded in Sicily when he was blown from a tank, and Pvt. Richard Firenze of the Marines, recovering from shoulder and leg wounds received at Guadalcanal.

An official War Department movie, "Fire Power," was shown to the employees, who were complimented for their part in War Production by the Army and Navy spokesmen, Maj. Bishop and Lt. Boeshaar.

Flow Meter Engineering

The handbook entitled, "Principles and Practice of Flow Meter Engineering" by L. K. Spink, widely accepted as a standard text and guide, has just been published in a new and enlarged edition by the Foxboro Company, Foxboro, Mass., the sixth since the book was first published in 1930. New and advanced phases of the subject are covered for the first time, bringing the book up to date and adding to its usefulness. The author, L. K. Spink, is a member of the working committee which developed the latest AGA orifice meter tables, a member of the ASME Fluid Meter Research Committee, and of the joint AGA and ASME Pulsation Research Committee. As an engineer who has devoted many years to the study of flow measurement, he is extraordinarily qualified to handle the subject.

The book, 232 pages in length, is illustrated with photographs, diagrams and curves, and contains all the tables and formulae needed for any ordinary liquid or gas flow computation. In the Liquid Section, methods for determining compressibility factors of liquids at temperatures near the critical, a new and more accurate method of correlating temperature expansion data on petroluem oils, a quick method of correcting for tap locations, and a short-cut method of correcting for viscosity, are some of the features.

The Gas Section suggests several methods of correcting for viscosity effects. Theoretical discussion, as well as working equations and tables for moisture and supercompressibility, are presented. A new and simple type of intermediate pressure device which eliminates the by-passing of gas is described.

The latest findings on the measurement of pulsating gas flows are fully covered.

"Principles and Practice" is a thoroughly practical handbook, recognized and used by men in the field as well as by technical institutes. Many large industrial concerns depend on it, considering it to be the most complete, accurate and workable publication on the measurement of gas and liquid flows that is available today. Price, $3.00.

Fighters on the WARREN PUMP Production Front. No. 7 of a Series

Among our younger but thoroughly experienced pump makers is Harold A. Sampson.

"Sampy", who operates a Horizontal Boring Mill, handling pump casings and other parts up to 30" sizes, has 14 years of Warren Pump experience behind him. He takes as deep pride in turning out the quality pumps that "are built to fit the job" as the skilled Warren Pump Makers who have been on the job for 20, 30 or even 40 years.

It is this pride that these skilled men take in Warren Pumps that enable Warren equipment to perform so faithfully in the gruelling 24 hour duty demanded in war plants or the do-or-die duty asked for in the United States Navy, Coast Guard and Merchant Marine. It is this pride that enabled these Warren Workers to win the Army-Navy "E" Award.

WARREN PUMPS

WARREN STEAM PUMP COMPANY, INC.
WARREN, MASSACHUSETTS

There can be no quality paper without quality wire
"The diagram at the left indicates the actual position of the wire in the box. It is made to assist you in placing the wire on the machine."
TOP SHOULD RUN THUS
1
2
3

Yes, we want our "package" to impress you favorably. Every box is kept newly painted. That will look well, of course. More than that, a fresh coat of paint helps waterproof the lumber. Our steel winding cores are coated with high grade lacquer. That looks well, too, but, more than that, it keeps rust and grease from injuring the wire. Thus every Lindsay wire travels in a strong, dry box, amply protected from untoward experiences . . . With every wire is enclosed a diagram like the one above to assist you in placing the wire on your machine. The diagram above is one of many which show how to unroll different types of wires. We believe that the precautions we take and those we suggest to you will aid you in securing better results from your purchases of Lindsay wire cloth.

THE LINDSAY WIRE WEAVING COMPANY

Serving the Paper Industry Since 1903

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Lindsay **WIRES**

FOR PAPER MILLS

FINANCIAL NEWS

New York Stock Exchange

High, Low and Last for Week Ending October 23, 1943

STOCKS

	High	Low	Last
A. P. W.	2⅝	2⅝	2⅝
Armstrong Cork Co.	37⅝	37¼	37¼
Celotex Corp.	13⅛	12	12⅜
Celotex Corp., pf.	18½	17⅞	18⅜
Certain-Teed Products Corp.	6	5⅝	5⅞
Certain-Teed Products Corp., pf.	69½	67	67¾
Champion Paper & Fibre Co.	20½	20	20⅜
Champion Paper & Fibre Co., pf.	107½	107½	107½
Congoleum Nairn Co.	22¾	22⅜	22⅜
Container Corp. of America	21½	21	21⅜
Continental-Diamond Fibre Co.	12½	11½	12½
Crown Zellerbach Co.	16¼	15⅞	16¼
Crown Zellerbach Co., pf.	98½	98	98¼
Dixie Cup Co.	14½	14	14
Dixie Cup Co.,—A	44¼	43¼	44¼
Flintkote Co.	20¼	19⅝	20¼
Flintkote Co., pf.	107¾	105	106¼
Robert Gair	3⅛	2⅞	3
Robert Gair, pf.	14	14	14
International Paper Co.	13⅝	12⅜	13
International Paper Co., pf.	67¼	65⅞	67
Johns-Manville Corp.	91¾	90⅞	91
Johns-Manville Corp., pf.	130	130	130
Kimberly-Clark Corp.	31	31	31
MacAndrews & Forbes	....	....	....
MacAndrews & Forbes, pf.	....	....	....
Masonite Corp.	38⅝	38	38
Mead Corp.	8⅛	8	8⅛
Mead Corp., pf. A—6%	86	85	85
Mead Corp., pf B—5½%	76	75½	75½
National Container Corp.	12⅝	12	12½
Paraffine Companies, Inc.	43½	43¼	43¼
Paraffine Companies, Inc., pf.	....	....	....
Rayonier, Inc.	13¾	12⅞	13⅛
Rayonier, Inc., pf.	31½	31	31
Ruberoid Co.	26⅛	24¾	24¾
Scott Paper Co.	40	38	38
Scott Paper Co., pf.	110½	110	110
Sutherland Paper Co.	28¾	28¾	28¾
Union Bag & Paper Corp.	10⅜	9⅜	10⅛
United Paperboard Co.	....	....	....
U. S. Gypsum Co.	75¾	73½	75½
U. S. Gypsum Co., pf.	179	178	178
West Virginia Pulp & Paper Co.	15¾	15⅛	15½
West Virginia Pulp & Paper Co., pf.	109¼	109	109

BONDS

Abitibi Pulp & Paper Co., 5s '53	66⅝	66⅝	66⅝
Celotex Corp., 3¾s '55	101½	101¼	101⅜
Certain-Teed Products Corp. 5½s '48	101¾	101¼	101¾
Champion Paper & Fibre Co. 4¾s '50	....	....	....
International Paper Co. 6s '55	107¼	107	107¼
International Paper Co. 5s '47	103⅞	103¾	103¾
Mead Corp. 3½s '53	....	....	....
West Virginia Pulp & Paper Co. 3s '54	104⅛	104⅛	104⅛

New York Curb Exchange

High, Low and Last for Week Ending October 23, 1943

STOCKS

	High	Low	Last
American Box Board Co.	7¾	7¾	7¾
Brown Co., pf.	....	....	....
Great Northern Paper Co.	32¾	32¾	32¾
Hummel-Rose Fibre Corp.	4¼	4¼	4¼
St. Regis Paper Co.	3¼	3	3⅛
St. Regis Paper Co., pf.	137	136	136
Taggert Corp.	4⅛	4	4⅛

BONDS

American Writing Paper Co. 6s '61	95	95	95

Paper Service Opens Canadian Office

Paper Service Company of 295 Lafayette street, New York City, has opened a branch in Toronto, Canada, with John A. Johnston as its representative.

A Canadian by birth and a native of Toronto, Mr. Johnston has been associated with the paper industry for the past 15 years and until his present appointment, was with Champion Paper Mills, Ltd.

Mr. Johnston will contact many of the Canadian Mills, the result of which, it is hoped, will create further sales of Canadian made papers through Paper Service Company.

The appointment of John Johnston as Canadian representative is a step, the company believes, in assuring merchants and exporters in the United States of an increased paper supply.

New Taylor Instrument

With the announcement of its new Level-Buoy the Taylor Instrument Companies of Rochester, N. Y., adds to its line a buoyancy-type instrument which both controls and indicates liquid level. The new instrument employs the Taylor fulscope control mechanism with either completely adjustable sensitivity for smooth throttling level control, or automatic reset for averaging of liquid level with a minimum disturbance to the process.

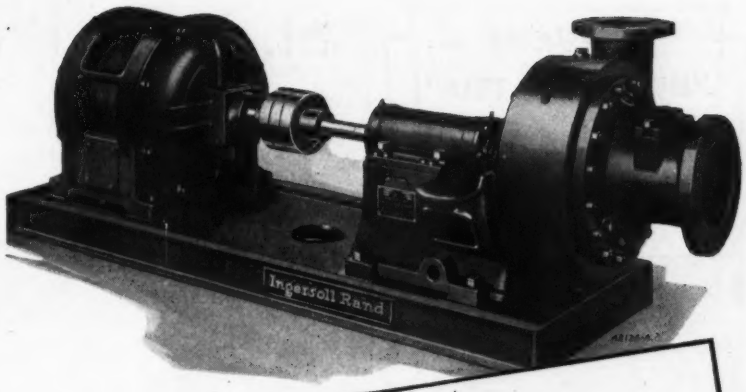
NEW BUOYANCY-TYPE

A torque tube transmits the level changes to the instrument mechanism. This eliminates a stuffing box with its need for lubrication or packing and gives a closed system which eliminates leakage. The torque tube is interchangeable with the ones used in the Taylor aneriod manometer which is a real advantage to instrument users in minimizing inventories of spare parts. There are no internal pivots to cause friction or wear.

America the Beautiful

A series of 14 lithographic reproductions, portraying diversified subjects, from direct color photographs has been issued under the title of "America the Beautiful," by Transcontinental and Western Air, Inc., Kansas City, Mo., and by the manufacturer of the paper used, the Harper Paper Company, Taylorville, Ill.

The color photographs have been lithographed on Harper Offset, white, basis 25 by 38, the 100-pound sheets pasted, Stipple Stucco Finish B-81 two sides. A screen of 175 was used for five of the color plates and a 133 line screen for the rest of the reproductions. Five color plates were used in the printing process to portray all the delicate color tones of the original kodachrome.



THERE ARE NO VACATIONS FOR PAPER MILL PUMPS

Paper stock pumps must be tough. They are often on 24-hour-a-day, 7-days-a-week service—and a shutdown disrupts the whole production schedule.

Ingersoll-Rand Cameron stock pumps are built to meet these conditions. There are the new vertical unit and the well-known horizontal unit—each designed to "stay on the job."

Other Ingersoll-Rand pumps are available to handle practically all of the liquid moving jobs in a paper mill.

Ask the Ingersoll-Rand engineer for complete details. Ingersoll-Rand Company, 11 Broadway, New York 4, N. Y.

Ingersoll-Rand
Cameron Pump Division 10-361

Paper Chemistry Course

St. Joseph's College, Philadelphia, Pa., offers several free courses in chemistry and physics, including a free evening course in paper chemistry. The courses are given in cooperation with the U. S. Office of Education under the Engineering Science, Management War Training Program.

The course in paper chemistry will be given alternately with a course on Unit Industrial Processes. It will include the fundamentals, such as the physical properties of paper and pulp. Laboratory work will comprise in part acid-base titrations, characteristics of paper and pulp, determination of strength, together with water analysis.

Requirements are a high school education or its equivalent in education or experience and women may enroll.

Applications should be made to Engineering, Science and Management War Training Program Director, St. Joseph's College, 54th street and City Line, Philadelphia 31, Pa.

PREVENT
"DRY-OUT-ITIS"
due to winter heat

Armstrong HUMIDIFICATION is widely used in paper industries to cut costs and speed production

Used in paper cutting rooms, paper storage, sorting rooms, in waxed paper and decalcomania manufacture, etc. Armstrong HUMIDIFICATION keeps paper in workable condition, cuts static electricity, and removes other evils of dry air. Also used in offices to maintain healthful, comfortable working conditions, and to prevent winter colds.

Simple, practical, quiet; connected to steam lines like a unit heater. Fully guaranteed. Units as low as $100 for 40,000 cu. ft. Ask for literature and reports from users.

ARMSTRONG MACHINE WORKS
818 Hoffman St. Three Rivers, Mich.

Write for Bulletin

AS LOW AS 2 CENTS PER HOUR!

BY THE MAKERS OF ARMSTRONG STEAM TRAPS

St. Regis Builds Bag Plant

The St. Regis Paper Company of New York has recently completed plans for the immediate erection of a new multiwall paper bag manufacturing plant in North Kansas City, Mo. Because of the ever growing demand for heavy duty multiwall paper bags to carry foodstuffs, chemicals, fertilizers and building materials for essential civilian requirements, sustenance of the armed forces and for lend-lease, the government has approved the full-speed-ahead completion of this project. The building contract has been awarded to the North Kansas City Development Company. Construction will start at once and the plant will be in full operation early in 1944, equipped to make sewn, pasted, valve and open-mouth bags and shipping containers, as well as small flour bags and sugar pockets. The new plant will be the eleventh bag factory operated in the United States by St. Regis Paper Company, pioneers in the manufacture of heavy-duty multiwell paper bags for domestic and overseas shipments. St. Regis also manufactures a complete line of automatic bag packing machines and bag closing equipment. In addition to the network of 11 bag plants in this country, St. Regis has three in Canada, three in South America and before Pearl Harbor, also operated a plant in Japan.

The Kansas City factory will be a one-story building of modern design, following the War Production Board's war construction specifications. The most modern straight line production equipment can be accommodated in its 320-foot length . . . rolls of kraft paper will come in at one end and the finished bags go out the other. Two hundred and fifty people will be employed in the exclusive manufacture of rugged multiple-walled paper shipping sacks which are now being used to package more than 300 widely varying products efficiently and economically. The specification kraft paper used in the construction of these moisture-resistant bags will come from nearby points. Rendering further assistance to the war progress by conserving vital freight car space, the Kansas City plant will save car-miles now consumed in the distance shipping of:

1. Kraft pulp from the Pacific Northwest and South to paper mills in the East.
2. The completed bags from the East to the "Bread Basket of America."

Washington estimates that there will be a total saving of 513,000 car-miles annually.

In the complex and hazardous business of wartime shipping, delays are extremely dangerous. Ships arrive with little advance notice and need flour . . . a cargo of flour must be packed, shipped and loaded so quickly that a minimum of time is available for shipment of the containers from the bag factory to the mill. The Kansas City plant will solve this problem for "bread basket" producers.

Producers and packers of flour and feed, chemicals, cement and other rock products, soy beans, cottonseed meal, foods, peas, beans and other free-flowing products are among those in the area who will benefit by the convenient location of the new St. Regis plant. Within the area served by the Kansas City plant there are thousands of important producers of these and other commodities for which the St. Regis Multiwall Paper Bag is a more efficient and economical shipping method. Easily and quickly filled and closed by St. Regis Packers these heavy duty paper bags have long proved their ability to save time, money and labor as well as affording increased protection in transit and storage.

Indianapolis Demand Active

INDIANAPOLIS, Ind., October 25 1943—Paper demand in all lines continued along the unprecedented lines of the week before and the main worry is where to get the paper. Demand for fine paper continued heavy, with government orders heavy and local jobbers say the heavy government demand is causing a dearth of paper in the local market because of inability of mills to fill local orders.

Box makers in Indiana are in a bad way with the holiday season approaching. Already they are working to the limit of their productive capacity, with most of their products going to defense industries and others with priorities. The jewelry, candy and other industries without strong priority ratings likely will be in poor shape. Every effort is being

made by the paper box manufacturers to ease the labor shortage, which is acute in this area. A ruling of the WMP commission last week freezes labor in the central Indiana counties. The changing of jobs will be curtailed sharply and it is possible the paper trade will not lose much more labor to the many defense industries in the area.

The roofing and building paper situation showed little change last week. There is nothing to indicate that the amount of construction in this area will be increased during the late fall. Much is needed, but little will be done about it. Demand for wrapping paper and bags continued high with fair supplies. Summer specialties, particularly towels, napkins, cups, plates and other like items, was good and likely will continue good during the winter, if there is no improvement in the laundry and linen situation.

In some instances the demand for rags eased off somewhat during the last week. White cuttings were not so much in demand and prices were somewhat below ceiling limitations. However, colored grades continued to be wanted and prices were hitting the ceiling. Roofing rags also were popular. Waste paper buying continued heavy with prices strong. Much of the demand was for the better grades.

Joins Wishnick-Tumpeer

Robert L. Wishnick, president of Wishnick-Tumpeer,Inc., manufacturers of chemicals and pigments, has announced the appointment of Mack Leblang as his assistant in the execution of the company's long range program of product research and manufacturing. The company's Witco Research Laboratories have long been actively engaged in the development of important processing materials for the chemical industry and of new products to replace increasingly scarce materials in various industries.

Wishnick-Tumpeer product and institutional advertising will also be under Mr. Leblang's supervision from the New York office at 295 Madison avenue.

Before joining Wishnick-Tumpeer, Inc., Mr. Leblang was general manager of Hazard Advertising company, New York, with whom he had been associated since 1929. While serving in that capacity he was responsible for Wishnick-Tumpeer advertising and is thoroughly acquainted with the company's activties.

The oiler

was a handsome lad, as all could plainly see.
He wore clothes like a poet at a smart society tea —
A flowing tie, a shirt that hung like sails upon a mast —
All baggy stuff that brushed the gears and gadgets as he passed.
Then one fine day he did it: snagged his gaudy zoot attire,
And tore himself to pieces and — what's worse
— he wrecked the wire.

Manpower is precious, now more than ever. Don't let your crews — especially green men — forget the elementary rules of safety; and that means, for one thing, *no loose clothing around moving machinery.* Be sure they take care of equipment too; properly handled, your Cheney Bigelow wartime wires will deliver all the fine service you've come to expect of them. We're keeping our skilled wire craftsmen on the job to *give you their best* . . . as always.

CHENEY BIGELOW

Fourdrinier Wires · · Dandys · · Cylinders · · Wire Cloth

CHENEY BIGELOW WIRE WORKS · 417 LIBERTY STREET · SPRINGFIELD, MASS.

PAPER
TRADE JOURNAL
This Reg. U. S. Pat. Off.
Henry J. Berger
EDITOR

Vol. 117 October 28, 1943 No. 18

COMING EVENTS IN PAPER INDUSTRY

NEW ENGLAND SECTION. Technical Association of the Pulp and Paper Industry—Third Friday of each month at the Roger Smith Hotel, Holyoke, Mass.

DELAWARE VALLEY SECTION. Technical Association of the Pulp and Paper Industry—First Friday of each month at the Engineers Club, Philadelphia, Pa.

LAKE STATES SECTION. Technical Association of the Pulp and Paper Industry—Second Tuesday of each month at the Conway Hotel, Appleton, Wis.

KALAMAZOO VALLEY SECTION. Technical Association of the Pulp and Paper Industry—First Thursday of each month at the Park, American Hotel, Kalamazoo, Mich.

LABOR PROBLEMS

Labor distribution and the adjustments of manpower to maintain the most efficient productivity, is an extremely difficult undertaking during a period of war. The objectives set up in the fulfillment of the huge commitments made by the Administration has as yet to be fully realized. In all fairness to management, labor, and government agencies, it may be said that in relation to the magnitude of the task of coordinating the many ramifications of the war effort, the results achieved are worthy of high praise. Many mistakes, faulty estimates, instances of poor judgment and lack of proper handling of various important matters in various government agencies, have, it is true, contributed to impair the good record made. The production of war goods has been enormous and the output of civilian goods has been reasonably well maintained. Loss of productivity through labor troubles is perhaps one of the most regrettable setbacks. The current coal mining situation and decline in supplies of this essential fuel, is an example of lack of proper cooperative effort of all the parties directly concerned. Labor disputes are, however, less serious than is the distribution of labor. Labor shortages comprise the nation's number one problem. Much can be done to improve the present situation but the problem over the whole country is so large that it seems practically impossible to entirely solve it.

In commenting on why production has declined, the current issue of the *Business Bulletin*, issued monthly by LaSalle Extension University, of Chicago, states in part: "The present rate of industrial production indicated by the LaSalle Index is 14% higher than a year ago. Greatest gains have been made in the durable goods industries, especially those producing machinery and transportation equipment, including airplanes, trucks and other military vehicles. Substantial gains have, in the same period, been made in the non-durable lines. . . . A comparison with preceding years, however, shows that the rate of production has increased considerably less than at any time since the war program started. The net increase this year has been about 3%, but, during the last half of 1942, it was almost 10%. During the first full year of the war program, the increase was 27%. The present leveling off indicates the probability that we are approaching the ceiling in total industrial output. Further gains in war production, as called for under schedules that have been set, will be made possible only by additional shifts of labor away from civilian production and from those industries rendering services to civilians."

Declaring that labor shortages are most serious the *Bulletin* states that, "Most recent surveys of the situation show that the main obstacle to further expansion is the shortage of workers, especially skilled and trained ones. Employment has been increasing and has reached the record peak of over 54,000,000 persons. The number of men employed has declined 2,700,000 during the past year as a result of the large additions to the armed forces. The number of women workers has increased 3,000,000 since a year ago and now totals 17,000,000. According to the census bureau, about 900,000 persons are without jobs. Some of these persons are only temporarily unemployed while shifting to other jobs. The increase in employment has not been sufficient to meet the demand. The War Manpower Commission estimates that unless the war situation changes much more favorably than is expected, 4,000,000 more persons will be required by the middle of next year. The armed forces now total 9,000,000 men and women. According to present plans they will be increased by 2,000,000 before next summer."

In reference to the urgency to the manpower situation the *Bulletin* points out that "To meet the situation will require the use of one or more alternatives. The first one is to arrange for more efficient production in order to get the goods turned out without requiring the anticipated increase in the number of workers. The second alternative is to curtail some phases of war production and to eliminate some of the less essential items. That method is quite generally rejected because the aim is to supply the armed forces with the maximum amount of material and equipment in order to enable them to get results quickly and efficiently. Few persons want to follow a policy that would in any way slow down the progress of the war. The third alternative is to review again the civilian production that is still being carried on at relatively high rates and to restrict further the manufacture of less essential civilian goods. Perhaps in the interest of success in the war, civilians can get along without some of the goods and services to which they have been accustomed. A reappraisal of civilian

needs may be one way of helping to relieve the labor shortage."

Direct attention to the supply of materials the *Bulletin* states in part that, "Shortages of materials have hampered output in some cases, but since the Controlled Materials Plan was adopted, the supplies of raw materials have been much better utilized and the lack of them has not handicapped or retarded operations nearly so much as it did last year. . . . Difficulties in management and in the coordination of the many parts of the vast war program have also been a factor in holding back industrial expansion. Strikes have stopped production in some key plants, but the number of workers involved was only a very small percentage of the total. High labor turnover and absenteeism have also affected production."

S. H. Sisson Gets Major's Commission

[FROM OUR REGULAR CORRESPONDENT]

POTSDAM, N. Y., October 25, 1943—Announcement is made here of the appointment of Stanley H. Sisson, for many years prominently connected with the Racquette River Paper Company, to a commission as major in the army specialist reserve. He is a son of George W. Sisson, of the Racquette River Paper Company and in recent years has been supervising logging operations in the vicinity of Tupper Lake. He was a candidate for Republican nomination as Congressman in 1938 but was defeated. A graduate of Cornell University in 1917, he served as an enlisted man with a destroyer flotilla during the last war and was later commissioned a lieutenant in the navy.

Production Ratio Report*

(Production as per cent of six-day capacity)

COMPARATIVE WEEKLY SUMMARIES

Current Weeks—1943 (Holiday September 6)		Corresponding Week—1942	
September 11	75.7	September 12	70.3
September 18	92.4	September 19	85.2
September 25	92.1	September 26	87.2
October 2	92.7	October 3	87.8
October 9	91.0	October 10	88.0
October 16	90.5	October 17	89.8

COMPARATIVE MONTHLY SUMMARIES

Year	Jan.	Feb.	Mar.	April	May	June	July
1942	104.5	103.9	103.9	100.4	95.3	87.4	75.8
1943	87.2	88.9	89.5	88.7	91.4	86.5	84.4

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Avg.
1942	80.8	82.8	90.6	86.9	80.1	90.4
1943	91.1	88.3				

COMPARATIVE YEARLY SUMMARIES

	1936	1937	1938	1939	1940	1941	1942	1943
Year to Date..	78.7	85.4	70.2	80.5	86.2	85.6	92.0	88.6
Year Average..	80.4	79.8	71.5	73.4	85.6	97.4	90.4	

* Based on tonnage reported to American Paper and Pulp Association. Does not include mills reporting to National Paperboard Association, except in isolated cases where both paper and paperboard are produced and separate tonnage figures are not readily available. Does not include mills producing newsprint exclusively.

PAPERBOARD OPERATING RATIOS†

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year Avg.
1937	83	89	89	91	88	80	69	77	72	70	57	47	75
1938	56	63	63	60	60	59	59	60	70	73	67	61	64
1939	65	73	76	74	69	73	68	77	82	91	88	77	77
1940	78	75	74	76	82	85	77	79	78	85	82	77	78
1941	81	88	89	89	91	94	92	98	95	99	98	90	92
1942	102	101	101	95	82	72	68	75	76	81	82	77	84
1943	86	88	94	94	96	94	89	96	94				

Week ending Sept. 11, 1943—83 Week ending Oct. 2, 1943—97
Week ending Sept. 18, 1943—98 Week ending Oct. 9, 1943—94
Week ending Sept. 25, 1943—96 Week ending Oct. 16, 1943—95

† Per cents of operation based on "Inch-Hours" reported to the National Paperboard Assn.

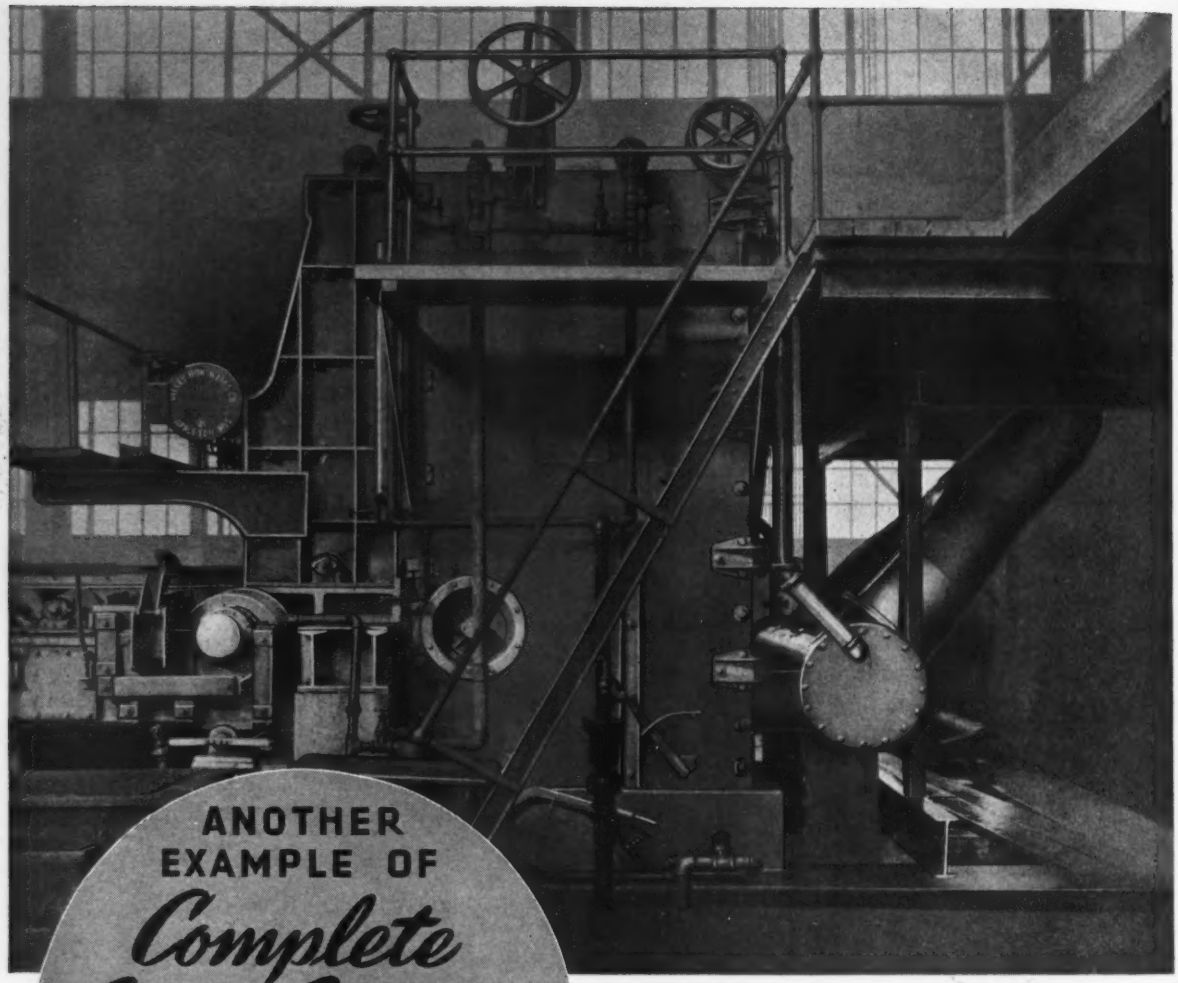
WHY NOT TRY WITCO CARBON BLACK NO. 11?

Looking for a better carbon black to use in the production of your black papers? Why not try WITCO BLACK NO. 11? It is produced especially for use in paper manufacture—can be added directly to the beater in the bag in which it is shipped—saves time and trouble on the job. And since it is a pellet black of the dustless type it minimizes the problem of dust when put in the beater with other materials. It is cleaner than the uncompressed type ordinarily used. A sample of WITCO BLACK NO. 11 for trial purposes will be sent to you promptly on request.

WISHNICK-TUMPEER, INC.

Manufacturers and Exporters

New York, 295 Madison Avenue • Boston, 141 Milk Street • Chicago, Tribune Tower • Cleveland, 616 St. Clair Avenue, N.E. • Witco Affiliates: The Pioneer Asphalt Company • Panhandle Carbon Company • Foreign Office, London, England.



ANOTHER EXAMPLE OF

Complete Stock Entrance

BY

VALLEY

Chances are, you are not headbox-conscious unless you have a problem . . . but one look at the sheets coming off of a few of our complete-stock-entrance installations* . . . will convince you that for all problems pertaining to putting stock onto the wire . . . you should CONSULT VALLEY.

**All grades: from slow-speed rag and glassine to the fastest running sheets in the world.*

VALLEY IRON WORKS CO. • APPLETON, WIS.

Slices and Head Boxes • Screw Presses • Micro-Mist Spray Dampeners • Laboratory Equipment
Pulp Washing Systems • High-Speed Beaters • Breaker Beaters • Vortex Beaters • Plug Valves
Flat and Rotary Screens • Thickeners • Deckers • Paper Markers • Roll-Headers

Section of the
TECHNICAL ASSOCIATION
OF THE PULP & PAPER INDUSTRY
122 E. 42nd St., New York 17, N. Y.
Edited by R. G. Macdonald, Secretary

United States Patents on Papermaking

Third Quarter, 1943

Compiled by Clarence J. West, Chairman, Committee on Abstracts and Bibliography, TAPPI

The following list of patents has been compiled from the current numbers of the Official Gazette of the United States Patent Office. Because, as a rule, only one claim is published in the Gazette, it is not claimed that the list is complete; also, it is possible that the list may contain some patents which do not apply to pulp and paper manufacture.

Copies of any of the following patents may be obtained from the U. S. Patent Office, Washington, D. C., by sending ten cents for each patent desired. The number, name of the inventor, title of the patent, and date should be given in the request. Personal checks and stamps are not accepted in payment for patents. Books of coupons may be purchased for two or ten dollars good for 20 or 100 patents. Coupon orders do not have to be accompanied by letters of transmittal. They require nothing but the filling in of the patent number, the name of the inventor, the date of issue, and the name and address of the party desiring the service.

July 6, 1943

2,323,287 Paper cup. Walter E. Amberg, assignor to Universal Paper Products Company, Chicago, Ill. Filed August 14, 1939. 4 claims. (Cl. 229-53). A drinking cup of the envelope type.

2,323,288. Paper cup. Walter E. Amberg, assignor to Universal Paper Products Company, Chicago, Ill. Filed April 17, 1940. 10 claims. (Cl. 229-53). A drinking cup of the envelope type adapted to assume a predetermined shape when opened by lateral pressure.

2,323,339. Momentarily consolidated board product. William H. Mason, assignor to Masonite Corporation, Laurel, Miss. Filed Dec. 10, 1938. 4 claims. (Cl. 92-39). A roll-consolidated board product having two finished surfaces is composed of extensively hydrolyzed lignocellulose with only a small proportion of water-soluble material; the strength and stiffness depend upon the plastic character of the constituent material.

2,323,342. Pressure-sensitive tape. John A. McManus, Marblehead, and Martin G. Higgins, Lynn, Mass. Filed June 24, 1940. 2 claims. (Cl. 154-43). The tape is coated on both surfaces and has a narrow liner of paper along at least one of the longer borders of the tape.

2,323,387. Process of producing water repellent textile material. Oscar Edelstein, assignor to The Pond Lily Company, New Haven, Conn. Filed Dec. 4, 1939. 2 claims. (Cl. 117-92). The material is treated with a salt of aluminum, zirconium, cerium, nickel, lead, barium, etc., the dried material treated with an alkali to form the hydroxide, and the fibers treated with wax.

2,323,505. Sealing structure for containers. Isaac L. Wilcox, assignor to Oswego Falls Corporation, Fulton, N. Y. Filed April 5, 1940. 7 claims. (Cl. 229-43).

2,323,550. Filler material for paint, rubber, paper, etc. Alan R. Lukens, Belmont, Mass. Filed Aug. 3, 1940. 12 claims. (Cl. 260-765). Mechanically ground limestone, 99.8% (by weight) of the particles of which are smaller than 15 microns in diameter and 17% less than one micron.

2,323,564. Perforated plasterboard. John Page, assignor to United States Gypsum Company, Chicago, Ill. Filed Dec. 19, 1938. 6 claims. (Cl. 72-124). A perforated gypsum core board.

2,323,593. Manufacture of chlorine dioxide. Clifford Allen Hampel and Maurice C. Taylor, assignors to The Mathieson Alkali Works, Inc., New York, N. Y. Filed Oct. 8, 1941. 4 claims. (Cl. 23-152).

2,323,594. Production of chlorine dioxide by reaction of chlorites and aldehydes. Clifford A. Hampel, assignor to The Mathieson Alkali Works, Inc., New York, N. Y. Filed Oct. 29, 1941. 10 claims. (Cl. 23-152).

2,323,798. Control of induction period in blueprint paper. Clyde A. Crowley and George H. Goodyear, assignors to The Huey Co., Chicago, Ill. Filed June 14, 1941. 8 claims. (Cl. 95-6). A sensitizer for blueprint paper which contains an oxidizing agent containing the peroxy group.

2,323,799. Control of induction period in blueprint paper. Clyde A. Crowley and George H. Goodyear, assignors to The Huey Co., Chicago, Ill. Filed Dec. 1, 1941. 8 claims. (Cl. 95-6). The sensitizer contains a persulphate salt.

July 13, 1943

2,323,918. Drying fiberboard and the like. Joseph F. Kiernan, Brooklyn, N. Y. Filed March 26, 1941. 2 claims. (Cl. 34-23). The surfaces of the board is subjected to heat and pressure along all portions of a transverse area extending crosswise of the board, simultaneously supplying currents of drying air to the surface of the sheet at the said area, releasing the pressure to allow the surfaces to expand and circulating the air over the surface to remove the moisture.

2,324,060. Photographic copying paper. Fred W. Boughton, assignor to Eastman Kodak Company, Rochester, N. Y. Filed Oct. 9, 1940. 15 claims. (Cl. 95-6). The surface coating is a triphenylmethane leuco base and a sensitizing salt.

2,324,230. Process of preparing wood pulp. Frederick Olsen, Soldon Feldman, and Lyle Melvin Sheldon, assignors to The Cellulose Research Corporation, East Alton, Ill. Filed Jan. 30, 1939. 6 claims. (Cl. 92-11). A sulfite pulp with a bleachability of less than about 15% and a viscosity of about 10 centipoises is treated with chlorine until the bleach value is reduced to not greater than about 1%.

2,324,358. Bag making machine. Edwin E. Burroughs, assignor to Potdevin Machine Company, Brooklyn, N. Y. Filed Jan. 21, 1941. 2 claims. (Cl. 93-14).

2,324,380. Apparatus for slitting paper. John Frel, Jr., assignor to The W. S. Gilkey Printing Company, Cleveland, Ohio. Filed April 6, 1942. 10 claims. (Cl. 164-35).

2,324,393. Bag making machine. John Hohl and Olav Bjering, Toledo, Ohio, Eino E. Lasko, Fitchburg, Mass., and Clarence W. Vogt, Weston, Conn.; said Hohl, Bjering and Lasko assignors to Owens-Illinois Glass Company. Filed Sept. 13, 1939. 44 claims. (Cl. 93-18).

2,324,405. Carton sealing device. James W. Lively, San Jose, Calif. Filed Aug. 22, 1941. 5 claims. (Cl. 93-53).

July 20, 1943

2,324,519. Drying of distended fibrous products. Otto J. Krueger and John Caresio, assignors to Masonite Corporation, Laurel, Miss. Filed Aug. 3, 1940. 4 claims. (Cl. 34-7). Thick wet sheets containing fibers held in distended relationship by relatively stable bubbles is treated with water on the upper part and dried by hot circulating gases directed toward the surface.

2,324,529. Manufacture of paper and board. Sidney Musher, assignor to Musher Foundation, Incorporated, New York, N. Y. Filed June 5, 1939. 4 claims. (Cl. 92-40). The board is treated with a starch lecithin mixture and dried above 180° F., the final board containing 0.01-2% lecithin.

2,324,572. Means and method for securing ends to tubes. Robert R. Frederick and Adolph W. Awot, assignors to Sloane-Blabon, Trenton, N. J. Filed May 12, 1941. 23 claims. (Cl. 93-39.1).

2,324,668. Machine for making twisted paper. Leslie F. Barnum, Detroit, Mich. Filed Jan. 23, 1942. 11 claims. (Cl. 57-31).

2,324,686. Adhesive applier. Charles B. Fantone, assignor to Syncro Machine Company, Rahway, N. J. Filed Aug. 23, 1941. 6 claims. (Cl. 91-44).

2,324,709. Pressure resisting waterproof buoyant container. Harry H. Lindley, assignor to Lindley Box & Paper Company, Marion, Ind. Filed Oct. 15, 1942. 3 claims. (Cl. 217-17).

2,324,757. Carton, carton blank, and method of making the same. Richard M. Botley, assignor to Hawaiian Pineapple Company, Limited, Honolulu, Territory of Hawaii. Filed June 3, 1941. 7 claims. (Cl. 229-37).

2,324,845. Beater roll. Dwight E. Jones, assignor to E. D. Jones & Sons Company, Pittsfield, Mass. Filed Jan. 22, 1941. 6 claims. (Cl. 92-22). An elongated cylindrical unitary roll has rings secured in spaced relation longitudinally thereof provided with circumferentially spaced aligned slots, cutter bars, etc.

2,325,016. Paper machine slice assembly. David Warren, assignor to Fraser Companies, Limited, Edmunston, New Brunswick, Canada. Filed Nov. 16, 1938. 4 claims. (Cl. 92-44). An exceptionally wide range of adjustment is obtained by mounting the slice plate so that it may be raised or lowered with reference to the web-forming element or swung to different angular positions along the path of travel of the web-forming element.

July 27, 1943

2,325,026. Method for testing feltable fibers. Herman W. Anway, assignor to Wood Conversion Company, Cloquet, Minn. Filed Jan. 15, 1940. 9 claims. (Cl. 73-51). A method of testing feltable fibers to determine frictional characteristic of a sliding mass of the fibers.

2,325,027. Testing apparatus for compressing resilient masses. Herman W. Anway, assignor to Wood Conversion Company, Cloquet, Minn. Filed Oct. 8, 1941. 7 claims. (Cl. 265-12).

2,325,030. Paper cutter. Oscar Bellar, Brooklyn, N. Y. Filed Sept. 26, 1941. 34 claims. (Cl. 164-54).

2,325,042. Method and apparatus for bottoming bags. Harry H. Crawford, assignor to St. Regis Paper Company, New York, N. Y. Filed May 27, 1941. 9 claims. (Cl. 93-23).

2,325,055. Thermal insulation. Clark C. Heritage, assignor to Wood Conversion Company, Cloquet, Minn. Filed May 22, 1940. 8 claims. (Cl. 154-44). The material is an aggregate mass of essentially lignocellulose fibers.

2,325,085. Antioxidizing paraffin composition. Herbert G. Vore, assignor to American Seal-Kap Corporation of Delaware, Wilmington, Del. Filed Feb. 14, 1941. 9 claims. (Cl. 106-270). Paraffin wax baths contain 0.003-0.04% of a petroleum residue asphalt.

2,325,159. Apparatus for separating fibers. James T. Coghill, assignor to The Noble & Wood Machine Co., Hoosick Falls, N. Y. Filed March 14, 1940. 11 claims. (Cl. 92-29). A method of separating the fine fibers consisting of a chamber fitted with a rotor, the rotor being provided with a plurality of alternating ribs and grooves; this obviates the use a screen prior to formation into a web.

2,325,162. Coating machine. Carl W. Goodwin and Herbert G. Vore, assignors to American Seal-Kap Corporation of Delaware, Wilmington, Del. Filed May 19, 1941. 7 claims.

(Cl. 91-45). A machine for applying adhesive to the skirt folds of hood caps.

2,325,167. Antioxidizing paraffin composition. Herbert G. Vore, assignor to American Seal-Kap Corporation of Delaware, Wilmington, Del. Filed March 29, 1940. 4 claims. (Cl. 106-270). The wax bath contains 0.02-0.04% of montan wax.

2,325,172. Sandpaper manufacture. Joseph N. Borglin, assignor to Hercules Powder Company, Wilmington, Del. Filed Jan. 20, 1942. 14 claims. (Cl. 51-301). The coating consists of a protein adhesive and polymerized rosin and water-soluble salts thereof.

2,325,302. High-wet-strength paper. Kenneth W. Britt, assignor to Scott Paper Company, Chester, Pa. Filed Nov. 3, 1938. 8 claims. (Cl. 117-155). The paper contains 0.5-5% of a resin formed from urea and an aliphatic saturated aldehyde containing 1 to 4 carbon atoms.

2,325,338. Apparatus for felting fibrous sheets. Carl G. Muench, assignor to The Celotex Corporation, Chicago, Ill. Filed Oct. 18, 1939. 2 claims. (Cl. 92-44). The patent relates to a skimming device on a Fourdrinier machine adapted for felting fiber board and comprises essentially a felting screen, pressing felts, suction boxes, and a head box and a machine box from which the stock flows to felt on the screen.

2,325,350. Visual color comparator. Douglas L. West, assignor to Howard Smith Paper Mills, Limited, Montreal, Quebec, Canada. Filed Oct. 29, 1940. 4 claims. (Cl. 88-14). An instrument for comparing, on a qualitative basis and by direct visual examination, the color characteristics of a standard and a sample.

2,325,408. Coated glassine paper. Toivo A. Kauppi and Roger W. Kolderman, assignors to The Dow Chemical Company, Midland, Mich. Filed Aug. 5, 1942. 9 claims. (Cl. 117-86). Glassine paper is precoated with an aqueous emulsion of an ethylcellulose lacquer, water and volatile solvent are removed, and the dried sheet is coated with a low viscosity ethylcellulose melt.

2,325,542. Extraction of lignosulphonic acid. William C. Pritchard and Robert A. Daily, assignors to General Motors Corporation, Detroit, Mich. Filed Jan. 25, 1940. 2 claims. (Cl. 260-124). Waste sulphite liquor is treated with sulphuric acid to give a density of 1.3 and the precipitate of lignosulphonic acid is extracted with water.

2,325,570. Lignocellulose for molding compounds. Raphael Katzen, Richard H. Plow, and Edgar T. Olson, assignors to Northwood Chemical Company, Phelps, Wis. Filed June 29, 1940. 9 claims. (Cl. 106-163). A molding compound consists of phenol-formaldehyde and hydrolyzed lignocellulose, the latter containing 2-6% moisture, has a pH of 3-6 and contains 35-50% lignin.

August 3, 1943

2,325,584. Method of making coated laminated paper. Philip S. Barnhart, assignor to Westfield River Paper Company, Inc., Russell, Mass. Filed Feb. 2, 1940. 4 claims. (Cl. 154-40). Sheets of glassine paper are united with a binder comprising at least 40% wax, which binder is fused, an outer coating of thermoplastic composition containing a volatile solvent is applied to the laminated paper and the coated paper dried at a temperature lower than that which previously fused the binder.

2,325,624. Treatment of paper and paperboard. Sidney Musher, assignor to Musher Foundation, Incorporated, New York, New York. Filed March 11, 1940. 6 claims. (Cl. 8-115.5). The paper or paperboard is treated with 0.2-5% of deoiled spice residue and heated to at least 220° F.; the paper or board has a pH of 4-6.9.

2,325,798. Coating flexible webs. Laurence W. Porter, assignor to S. D. Warren Company, Boston, Mass. Filed June 3, 1940. 3 claims. (Cl. 117-68). A method of coating the opposite sides of a paper web successively by the air-brush method without the necessity of intermediate application of drying heat.

2,325,963. Thermoplastic adhesive composition. de Forest Lott, Henry Grinsfelder, and Edward G. Hamway, assignors to Textileather Corporation, Toledo, Ohio. Filed July 5, 1940. 7 claims. (Cl. 260-23). The adhesive consists of 87% vinyl chloride and 13% of vinyl acetate, a stabilizer of calcium stearate and a plasticizer.

2,326,088. Apparatus for determining the tendency of paper to shrink. George S. Witham, Jr., assignor to W. L. E. Gurley, Troy, N. Y. Filed Dec. 12, 1940. 8 claims. (Cl. 73-51).

August 10, 1943

2,326,118. Pregummed hanging material. Hans F. Bauer, Jordan V. Bauer, and Don M. Hawley, assignors to Stein, Hall Manufacturing Company, Chicago, Ill. Filed Oct. 4, 1940. 6 claims. (Cl. 117-122). Wallpaper is coated with a remoistening adhesive formed by heating an incompletely dextrinized starch conversion product and an aldehyde at 30-340° F.

2,326,233. Fireproofing composition. Martin Leatherman, Hyattsville, Md. Filed June 4, 1941. 12 claims. (Cl. 252-8-1). The composition contains zinc carbonate and a chlorinated resinous material which will liberate hydrogen chloride at temperatures below the decomposition point of zinc carbonate.

2,326,387. Drawing composition and method of making the same. Edward A. Nill, assignor to The H. A. Montgomery Company, Detroit, Mich. Filed July 31, 1940. 13 claims. (Cl. 252-18). A drawing composition bases comprises sulphonated tall oil and plasticizing amounts of sulphonated sperm oil.

2,326,429. Glue spreader, surface coater and the like. John E. Black and Robert S. Black, Mendota, Ill. Filed May 1, 1941. 21 claims. (Cl. 91-49).

2,326,516. Compressed and densified product and the method of making the same. George B. Brown, assignor to Johns-Manville Corporation, New York, N. Y. Filed Jan. 19, 1940. 4 claims. (Cl. 106-120). A heat insulating sheet having a high modulus of rupture consists of asbestos fiber and a binder of hydrated lime and finely divided silica.

2,326,517. Method of manufacturing fibrous insulation. George B. Brown, assignor to Johns-Manville Corporation, New York, N. Y. Filed Jan. 16, 1941. 5 claims. (Cl. 92-55). The product consists of amosite fibers, hydrated lime, finely divided diatomaceous earth, and water which is shaped, dried and heated.

2,326,608. Guard device for paper or like machines. Louis Boraks, assignor to Liberty Mutual Insurance Company, Boston, Mass. Filed Jan. 14, 1942. 24 claims. (Cl. 192-133). Safety mechanism for paper cutting devices.

2,326,689. Storage battery separator. Bruno H. Schubert, assignor to National Lead Company, New York, N. Y. Filed Oct. 2, 1941. 6 claims. (Cl. 136-149). The separator has incorporated therein a small amount of an active organic ligneous compound.

2,326,690. Composition storage battery separator and method of making the same. Bruno H. Schubert, assignor to National Lead Company, New York, N. Y. Filed Oct. 2, 1941. 9 claims. (Cl. 136-146). The separator consists of porous rubber and small amounts of an active organic ligneous compound.

2,326,723. Roofing. George Arthur Fasold and Harold W. Greider, assignors to The Philip Carey Manufacturing Company, Lockland, Ohio. Filed Dec. 18, 1940. 19 claims. (Cl. 154-51). Details of a roof covering having high resistance to fire.

2,326,724. Roofing. George Arthur Fasold and Harold W. Greider, assignors to The Philip Carey Manufacturing Company, Lockland, Ohio. Filed June 20, 1941. 15 claims. (Cl. 154-51). A roofing with a blister barrier waterproofing layer.

August 17, 1943

2,326,758. Method of and apparatus for producing pulp articles. Merle P. Chaplin and Charles J. Chaplin, assignors to Chaplin Corporation, Portland, Maine. Filed Oct. 26, 1937. 5 claims. (Cl. 92-56).

2,326,763. Acoustic material. Dean D. Crandell, assignor to National Gypsum Company, Buffalo, N. Y. Filed June 28, 1939. 1 claim. (Cl. 154-44). A body of low density, compacted cellulosic fibrous material coated with a protein and an inorganic filler.

2,326,849. Paper sizing material. George B. Fowler and Donald K. Pattiloch, Springfield, Mass.; said Pattiloch assignor to Chemical Development, Inc., Chicago, Ill. Filed Sept. 27, 1941. 9 claims. (Cl. 106-80). The precipitable sizing material consists of a mixture of starch, rosin, and an alkali silicate from the group of metasilicate and sesquisilicate.

2,326,931. Apparatus for forming bags. Thomas B. Dalton and Ralph H. Weisner, assignors to Reynolds Metals Company, Richmond, Va. Filed April 24, 1940. 6 claims. (Cl. 93-8). Machine for continuously forming open-mouth bags having folded seamless bottoms and heat-sealed edges.

2,327,039. Spray evaporator. Sheldon B. Heath, assignor to The Dow Chemical Company, Midland, Mich. Filed July 10, 1941. 5 claims. (Cl. 159-4).

2,327,267. Packaging machine. Stanley R. Howard, assignor to Pneumatic Scale Corporation, Limited, Quincy, Mass. Filed July 14, 1939. 8 claims. (Cl. 93-6).

August 24, 1943

2,327,468. Art of severing webs. William M. Stocker, assignor to Cameron Machine Company, Brooklyn, N. Y. Filed Sept. 11, 1941. 28 claims. (Cl. 164-65).

2,327,540. Manufacture of substitute leather. Raymond C. McQuiston, assignor to Tanide Products Incorporated, Watertown, Mass. Filed Feb. 18, 1939. 4 claims. (Cl. 117-163). Felted cellulosic material is saturated with a solution of protein material hydrolyzed under definite conditions and tanning materials containing dispersed rubber latex, followed by a coagulant.

2,327,709. Bottom structure for folding paper boxes. Ross A. Himes, Oakland, Calif. Filed Feb. 24, 1941. 6 claims. (Cl. 229-39).

2,327,710. Bottom structure for folding paper boxes. Ross A. Himes, Oakland, Calif. Filed Mar. 28, 1941. 4 claims. (Cl. 229-41).

2,327,952. Method and machine for forming blanks for paper receptacles. Fred R. Zimmerman, assignor to Dixie-Vortex Company, Chicago, Ill. Filed Jan. 19, 1939. 38 claims. (Cl. 93-36).

August 31, 1943

2,328,109. Divisible paper web. Oscar T. Thompson, assignor to International Cellucotton Products Company, Chicago, Ill. Filed May 16, 1940. 4 claims. (Cl. 206-58). A paper web adapted to be rolled up and to be used by tearing off short pieces from the free outer end of the roll.

2,328,183. Coating apparatus. William Barrett, assignor to Minnesota and Ontario Paper Company, Minneapolis, Minn. Filed May 4, 1942. 8 claims. (Cl. 91-30). A combination of a fountain, a roller, an air seal, a doctor blade and a resilient pad.

2,328,198. Low electrical resistance paper and method of making same. Franklyn E. Davenport, David C. Knowlton, and Robert C. McCormick, assignors to Knowlton Bros., Watertown, N. Y. Filed April 12, 1939. 18 claims. (Cl. 92-21). Refined fibrous material and finely divided electrical conductive material (in the ratio of 6½ to 1) are formed into a sheet and compressed more highly and given more finish than obtained by a machine calender to render the paper highly conducive to electricity.

2,328,321. Drier drum. Earl E. Berry, assignor to Beloit Iron Works, Beloit, Wis. Filed July 31, 1939. 7 claims. (Cl. 34-9). Method of making machine glazed paper by contacting wet paper with a highly polished bronze surface of a drum and vaporizing the moisture in the paper at a rapid rate without blowing the paper off the surface. The drum is also claimed.

September 7, 1943

2,328,545. Hydraulic log-barking machine. Harry E. Bukowsky, Port Townsend, Wash. Filed Feb. 24, 1941. 8 claims. (Cl. 144-208).

2,328,749. Process for simultaneously manufacturing pulp and hydrogenated products from lignicellulose. Earl C. Sherrard and Elwin E. Harris, assignors to the Secretary of Agriculture of the United States. Filed July 15, 1939. 1 claim. (Cl. 92-9). A lignocellulosic material is heated at 150-225° C. at a pressure of 3000-6000 pounds per square inch with 10-100 parts of sodium hydroxide for each 200 parts of lignocellulosic material, with a lignin hydrogenation catalyst in an atmosphere of hydrogen until the lignin component is hydrogenated but the cellulose component is substantially unchanged.

2,328,837. Method for removing lime scale in heat exchangers for sulphite pulp digesters. Albert G. Natwick, Camas, Wash. Filed May 16, 1939. 1 claim. (Cl. 92-7). Circulation of the digester liquor through the exchanger is temporarily discontinued and sulfur dioxide gas and water vapor collected from the top of the digester are passed through the cooled exchanger, the strong sulfur dioxide solution allowed to remain long enough to dissolve the lime scale deposits.

2,329,034. Apparatus for coating paper. Ashley Wallace Buck and Floyd S. Finch, assignors to Imperial Paper & Color Corporation, New York, N. Y. Filed Jan. 15, 1941. 4 claims. (Cl. 91-50). Means for applying coating material to the surface of a rotatable transfer cylinder, means for drawing paper under tension over a substantial arc of the surface of the transfer cylinder (the arc being about 10°), means for adjusting the arc of contact between the paper and the cylinder and means for rotating the cylinder in the same direction as the travel of the paper and at a peripheral speed substantially less than the speed of travel of the paper.

2,329,051. Process for producing molded products. Frederick P. Hunsicker, assignor to Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa. Filed Mar. 2, 1940. 1 claim. (Cl. 154-2). A process for producing a flameproof product, comprising passing sheets of fibrous material through a 10-50% solution of ammonium or sodium sulfamate, drying, impregnating with a synthetic resin, and laminating the sheets.

2,329,143. Safety paper and method of making same. Burgess W. Smith, assignor to The Todd Company, Inc., Rochester, N. Y. Filed Mar. 25, 1941. 14 claims. (Cl. 117-1). A paper is treated with a colorless stain which produces a conspicuous color when acted upon by ink eradicators and reducing the activity at predetermined areas by printing warning words with a substantially colorless varnish.

2,329,144. Protective paper and method of making same. Burgess W. Smith, assignor to The Todd Company, Inc., Rochester, N. Y. Filed March 25, 1941. 7 claims. (Cl. 117-1).

September 14, 1943

2,329,263. Roll coating machine. Wiltie I. Gladfelter and William H. Moore, assignors to Crown Cork & Seal Company, Inc., Baltimore,

Md. Filed July 15, 1940. 18 claims. (Cl. 91-50). A machine for coating the surfaces of cylindrical articles comprising a revolvable turret and a coating roll.

2,329,277. Doctor blade for rolls and cylinders. Frederick W. Lodding, Worcester, Mass. Filed Oct. 17, 1940. 3 claims. (Cl. 92-74).

2,329,353. Method of and apparatus for folding blanks. Leon E. La Bombard, assignor to The International Paper Box Machine Company, Nashua, N. H. Filed Feb. 7, 1940. 16 claims. (Cl. 93-49).

2,329,527. Method of manufacturing rolls of tape. Edward Robert Golub, Flushing, N. Y., assignor to Atlantic Gummed Paper Corporation. Filed Jan. 18, 1941. 2 claims. (Cl. 206-59). The step of inserting transversely in a web of paper table a sealing strip.

2,329,553. Suction cylinder mold for papermaking machines. Maurice George Robert Newbould, assignor to Papercrete Limited, London, England. Filed Mar. 7, 1941. 1 claim. (Cl. 92-43).

2,329,663. Coating composition containing manila resin. Robert C. Swain and Pierrepont Adams, assignors to American Cyanamid Company, New York, N. Y. Filed Nov. 26, 1940. 4 claims. (Cl. 260-24). A manila resin and a melamine-formaldehyde resin which has been alkylated with an alcohol containing at least four carbon atoms, wherein the molal ratio of formaldehyde to melamine is at least about 2.5:1 and the weight ratio of manila resin to melamine resin is between 9:1 and 1:9.

2,329,664. Coating composition containing kauri resin. Robert C. Swain and Pierrepont Adams, assignors to American Cyanamid Company, New York, N. Y. Filed Nov. 26, 1940. 4 claims. (Cl. 260-24). A coating composition similar to the above with kauri resin substituted for manila resin.

SEPTEMBER 21, 1943

2,329,727. Utilization of waste heat. Curt Fredrik Rosenblad, assignor to American Heat Reclaiming Corporation, New York, N. Y. Filed Dec. 27, 1937. 4 claims. (Cl. 257-2). A combination of an accumulator and heat exchangers.

2,329,799. Device for the distribution of stock on the wire parts of papermaking machines. Kristen Andreas Thorsen, Grenoble, Isere, France; vested in the Alien Property Custodian. Filed Jan. 8, 1940. 12 claims. (Cl. 92-44). A means to feed a stream of paper pulp under pressure, an outlet nozzle or slice, a woven wire conveyor, a curved plate bridging a space between the nozzle and conveyor and means to adjust the length of path of the stream on the curved plate.

2,329,927. Method of and composition for treating cigarettes, cigarette paper, and tobacco. Joseph B. Morton, Dayton, Ohio. Filed April 28, 1938. 5 claims. (Cl. 131-4). The paper wrapper is treated with an aqueous solution of borax and salt.

2,329,959. Apparatus for measuring the water resistance of paper. Johannes A. Van den Akker, assignor to The Institute of Paper Chemistry, Appleton, Wis. Filed Mar. 15, 1940. 6 claims. (Cl. 73-51). A combination of a photocell mounted to receive fluorescent light emitted by the paper sample, an optical filter to permit substantially only fluorescent light to pass through and a galvanometer in circuit with the photocell.

2,330,124. Apparatus for waxing cartons. Thomas R. James, assignor to General Mills, Inc., Minneapolis, Minn. Filed May 31, 1941. 5 claims. (Cl. 91-55). Apparatus for waxing closed and sealed paper cartons.

SEPTEMBER 28, 1943

2,330,251. Fireproofing textile materials. William Ivan Taylor, Henry Charles Olpin, and Kenneth Ronald House, assignors to Celanese Corporation of America, New York, N. Y. Filed June 26, 1940. 2 claims. (Cl. 117-136). The fireproofing agent is a halogenated alkyl ester of phosphorus, a dispersing agent, pine oil, and water.

2,330,254. Article of manufacture. William Whitehead, assignor to Celanese Corporation of America, New York, N. Y. Filed June 28, 1941. 8 claims. (Cl. 106-177). Trichloroethyl phosphate is used as a fire-retarding agent.

2,330,361. Method of and apparatus for producing bags. Stanley R. Howard, assignor to Pneumatic Scale Corporation, Limited, Quincy, Mass. Filed March 14, 1941, 25 claims. (Cl. 93-3).

2,330,428. Manufacture of calcium carbonate-adhesive coatings. Ausker E. Hughes, Harold B. Browne, and Howard F. Roderick, assignors to Wyandotte Chemicals Corporation, Wyandotte, Mich. Filed Oct. 28, 1940. 7 claims. (Cl. 106-148). Calcium carbonate and casein or soya protein are kneaded in water.

2,330,446. Apparatus for producing bags. Thomas E. Piazze and Roy E. Hanson, assignors to Simplex Wrapping Machine Co., Oakland, Calif. Filed Sept. 12, 1938. 5 claims. (Cl. 93-18).

2,330,530. Paper laminating machine. John N. Tuttle, assignor to The Glassine Paper Company, West Conshohocken, Pa. Filed Aug. 12, 1939. 10 claims. (Cl. 154-37). A system of rollers for laminating paper.

2,330,607. Electrolyte paste and method of making same. Richard Müller and Harry Lee, Radebeul, near Dresden, Germany; vested in the Alien Property Custodian. Filed April 2, 1940. 4 claims. (Cl. 136-157). The chloride electrolyte is gelatinized by lignin residues from saccharification of wood or straw.

2,330,792. Method of treating tall oil. Anthony F. Oliver and Robert C. Palmer, assignors to Newport Industries, Inc., Pensacola, Fla. Filed Nov. 15, 1939. 4 claims. (Cl. 260-97.5). Tall oil is filtered through an absorbent medium, 8-18% of the total acidity of the oil neutralized with alkali and the treated oil heated at 260-325° C. for 10 min. to 8 hrs.

Government Printing Office and the War*

By A. E. Giegengack[1]

Gentlemen, I am especially pleased to have this opportunity to appear before you and to thank publicly the chairman of your advisory committee for the privilege he has given me to place before you the problems of the Government Printing Office. These problems are, of course, your problems, as well as ours. I say this because you are taxpayers and citizens of these United States, and the Government Printing Office is consequently your Office. As long as I am Public Printer I will do everything in my power to make it serve you and the country to the best of its capacity. In its efforts to carry out the heavy responsibilities placed upon it by law, the Government Printing Office, as your agent, needs your help now as never before. I want to emphasize here and now that what I may say will not be in a spirit of criticism of the lack of cooperation that the Office has received up to now but rather in the nature of a report to you of the obstacles we have had to overcome to do our job as well as we have. I feel that our not receiving from you the paper we ought to have had within a specified time is in part due, to this point, to my inability to give you a clear appreciation of the fact that an order from the Government Printing Office means that your Government needs that paper in the time indicated to carry out some important phase of our war program and that it gives you the opportunity to do your part in this life-and-death struggle in which we are all personally and vitally engaged. Will it impress you to know that I say advisedly that in this global war you, as paper manufacturers, are engaged in a life-and-death struggle? This statement is supported by the verbatim transcript of a conference held in my office with high-ranking officers of the War Department, in which these officers brought sharply to my attention the fact that your failure and mine to give the War Department the needed printed field and technical manuals, forms, and so forth, has already resulted in delaying invasions, in holding up campaign plans, and in slowing down attacks, and also in greater loss of life through confusion and inadequate training, because these manuals and instructional forms were not received in time to permit sufficient training and official direction of your own and our next-door neighbor's boys who have grown up in our midst and who are now giving their very lives in order that our American mode of life may endure.

September Bid Opened

On Monday, September 20, bids for paper for the 3 months beginning October 1, 1943, were opened. This proposal covers approximately 80 million pounds of paper of various kinds and grades. Only 40 bids were received covering approximately half of our offering. All this paper will be needed to do the type of printing that I have just described. Do you consider any commercial account more important than a book which teaches your boy how to navigate his plane over the wide waters of the globe or how to operate his other up-to-the-minute equipment?

We feel that there has been some misunderstanding about the essentiality of paper for the Government Printing Office. Statements which have been made

*Luncheon Address given at the Army and Navy Requirements Conference of the Technical Association of the Pulp and Paper Industry, Palmer House, Chicago, Ill., Sept. 21-24, 1943.

[1] Public Printer, U. S. Government Printing Office, Washington, D. C.

indicate to us that many think that when the Government Printing Office attempts to purchase paper, it is for the use of the Office. Nothing could be farther from the facts. The paper bought by the Government Printing Office is used in printing jobs for the Army, Navy, and other agencies of the United States Government. In fact, about ninety-five per cent of our present production is closely associated with the conduct of the war. The requirements of the Government Printing Office for paper for its own use do not amount to one-hundredth of 1% of the paper purchased.

There has been under consideration for some time a program which would centralize the purchase of paper for the Government in one board or committee. In this manner the various branches of the Government buying paper would not be competing with each other in an effort to get paper to meet the demands made upon them. It often happens that the Government Printing Office is in the market to purchase a large quantity of paper to print a job urgently needed by one of the war agencies at a time when that war activity is also in the market trying to purchase a large quantity of the same grade of paper. If the purchase of paper were in the hands of some central control board this would not happen.

The business of operating our Government, touching as it does the lives of every man, woman, and child in this country and also many lives in foreign lands, is the biggest in the world. It naturally follows that its Printing Office is the biggest and therefore the largest individual buyer of printing papers.

I assume that, as suppliers of printing papers, you are familiar with its organization, its duties, and responsibilities. I will, therefore, not dwell on such matters.

Printing Subcontractors

An amendment to the Printing Act of 1895 provides that printing and binding which the Office is not able or equipped to do may be produced elsewhere under contract made by the Public Printer with the approval of the Joint Committee on Printing.

To expedite our war effort another amendment permits the Public Printer to authorize any governmental agency to purchase specified printing and binding direct in the open market when the Office's load of work or equipment does not allow production within the requested time. In the fiscal year 1943 I authorized the several Federal departments and agencies to make direct purchase of printing amounting to over 11 million dollars.

The Government Printing Office, as large as it is, is not able to produce the vast volume of printing needed by the Federal agencies to carry on the war effort. For this reason and under the amendment mentioned, we started buying printing from commercial printers in August, 1940. In the fiscal year 1941 the printing thus procured from commercial printers amounted to approximately 2 million dollars and in the fiscal year 1943 it amounted to approximately 25 million dollars.

These figures represent the cost of printing and binding only, as all paper, plates, and other materials necessary to produce a job are, in the great majority of cases, supplied by the Government Printing Office and are not included in the figures quoted. Taking this into consideration, the commercial value of the printing placed by the Office with commercial printers throughout the United States reached the sum of approximately 50 million dollars for the fiscal year 1943 alone. Contracts for this printing have been scattered through the 48 States, and approximately 1,300 contractors in 288 cities shared in this work.

Army and Navy Printing

Under the act requiring all Federal printing to be done at the Government Printing Office, we handled approximately 100,000 jobs a year, and it is not uncommon to find at one time from 10,000 to 15,000 jobs in some stages of production in the plant or in some stage of planning for commercial procurement. In my endeavor to give you a clearer picture of your responsibility and mine in the war effort with particular reference to these 100,000 jobs, let me cite a few illustrations as to what they represent: The War Department averages over 600 requisitions per month for books and pamphlets alone, training and field manuals, Army regulations, and so forth. These books and leaflets total over 40,000,000 copies per month and range from 2 to 300 pages each.

Some reprint orders for manuals involve 1,500 or 1,600 requisitions in a period of 12 to 15 days and require from 12 to 13 million pounds of paper. One example will suffice: The Soldiers Handbook, that foundation stone of every rookie's training, ran into over 7 million copies in the last 12 months. This book contains 264 pages and required a total of 3,592,726 pounds of paper in its production.

Consider how directly connected with the war effort is the printing of the guide books for the Army. These guides accompany every advance our troops make. They explain local customs and provide a list of vital foreign words. Through them our Army is helped to develop the friendship and cooperation of peoples in strange lands. What is more to the point, they help our boys to understand the enemy. It would be hard to estimate the life and time they have saved, but we can know what the Army thinks of them: They are printed as soon as a new theatre of operations is to be opened and then they are rushed to that area by plane if necessary, to precede or accompany the boys right into the heat of action. I cannot discuss the amounts printed nor the countries involved for reasons you can readily understand, but this bit of information I can leave with you: It requires about 25,000 pounds of offset paper every working day. No failure on our part nor on the part of industry can be permitted to prevent such books from reaching the hands that need them, when they need them.

In addition there are thousands of different forms for the Army ranging from tickets for the repair of shoes, through medical forms, to pilots' examination papers.

Navy work follows the same pattern as that produced for the Army.

Outside of congressional jobs, probably 90% of our work is directly related to the war effort, and a great deal of the remaining 10% ties in if followed back a few steps. For instance, a census report on population may seem unnecessary, but it was used as soon as available by many agencies in the development of important programs, such as rationing, housing, transportation, war-loan drives, and so forth.

Who can say which is the most important, a field or training manual, a naval code for use in the con-

voys, the agriculture program that is to produce the food to feed the world, or the war-loan program to raise the necessary funds. They all combine into our total war effort—victory.

Surely everybody has heard why the 3d War Loan program is on. Could such a campaign be carried on without paper? Let me tell you what it involved for the Government Printing Office and the paper mills. There were 20 separate printing jobs, totaling 65 million copies. They ranged from a 32-page sales manual to a 28 by 40-inch poster in colors. Much of the paper had to be ordered from the mill. It had to be made on extremely short notice. We did not get the orders and copy until the 1st of August. We had to deliver a lot of it by August 15, and all of it by September 1st. It required 650,000 pounds of paper. Does anybody question the importance of this Government Printing Office order?

Ration Book Printing

The war effort is not confined entirely to the battlefield. The internal economy of the country must be controlled. One phase of this control is rationing. To gear properly the machinery of rationing, it is necessary that enormous quantities of printed matter be produced. A total of over 4 billion forms and books, requiring approximately 75 million pounds of paper, were produced in the fiscal year of 1943. This quantity is not so large if one considers that these forms and books reach and affect every person in the United States.

The swiftly changing economy of a country at war made it imperative late in 1942 that Nation-wide mileage and fuel-oil ration programs be instituted with great dispatch. Changing allocations of food with seriously depleted stocks made War Ration Book No. 2 a necessity if the ration structure were not to collapse. It allowed no hesitation on any of the three programs. All had to proceed at the same time, and a check up revealed an urgent need for about 7,500,000 pounds of paper for the project. Earlier estimates of the probable need for that period of time had been placed approximately at only 50,000 pounds. Conditions allowed for no if's or but's—only performance counted. That was forthcoming; 90 days saw completion of all this work.

Few people realize the prodigious task of printing for every person in the United States: the ration-coupon accounting through the banks required 300 million envelopes for use in turning stamps in at banks, or 4,400,000 pounds of paper stock used in a phase of the rationing program little known to the general public.

We are now embarking on a new venture in the control of the "black" market in gasoline, and again we have the time element: 10 days is all that can be allowed for the production and delivery of 250,000 pounds of paper stock to printing specialists whose schedules allow no break-down if we are to be successful. The paper used in printing ration currency and supplementary forms is the foundation upon which the present wartime economy is being built.

How the Tax Program Has Grown

The importance of the work of the Treasury Department in connection with the war needs no explanation, but let us note how, as a result of the war, the tax program has grown. In May of this year, we were asked to print seven forms totaling 326 million copies, delivery to be completed by June 15. These forms helped set up the procedure for the present tax-withholding program. Following that, the Treasury Department requested the Government Printing Office to print and deliver an additional 215,280,000 forms by August 15, to be used in filing the September reports. Our present program for returns to be filed March 15 is really a husky one. It calls for 32 forms, about 800 million copies, requiring approximately 8 million pounds of paper, the greatest part being chemical wood writing paper. This program means 200 cars of paper that will ultimately reach every community in America, almost every family, and it is up to us to get that paper in the hands of the printers within the next four weeks. If they do not get this paper on time and if these jobs are not delivered on time, every agency in the Government, including those directly concerned with the prosecution of the war, may face serious and delaying financial obstacles. Delay here will cost more than time and money. It will result in otherwise avoidable loss of life.

My object in welcoming this opportunity to lay these facts before you is to focus your attention on your essential part in keeping our war effort successful by giving the Government Printing Office, your agency as citizens and interested stockholders, the capacity to perform all work required from it on time, so that not one of you may have the least reason for reproach because of delinquency in backing the attack with the means immediately at your disposal, furnishing the needed paper on time and at the designated point of delivery.

Do not think for a moment that we have not a keen realization of your problems. They have been the basis of endless conferences with the War Production Board and the War Manpower Commission and I can assure you that every effort is being made to relieve the pulp situation and to lend you all possible assistance with your manpower problems.

The Government Printing Office itself has lost to the armed forces 1,800 employees and has sustained other losses and must carry on as you do, with a reduced and under-trained force.

Conclusion

To sum up the obstacles and problems that must be surmounted and solved if we are to do the job that faces us: Briefly, the reasons so far for our failure to receive from you the paper we need, in the time we need it, are, I believe, the following:

(1) The delaying of our orders by the acceptance of other orders calling for shorter delivery dates;

(2) The manpower shortage; and

(3) The shortage of unequal distribution of pulp.

There have been reports of other reasons why our orders are not accepted. One of these which I am reluctant to believe is that some of the mills refuse our offerings because they feel that there is more profit in their commercial business. If that feeling does exist in any quarter, I sincerely trust that now with a clearer appreciation of the vital need for the paper we ask you to supply us, and the part that that paper will play not only in strengthening the hands of those who are defending us on the battle fronts but also in the fight against inflation and chaos in our home economy, no one of us will put personal gain or profit above the opportunity to serve our country.

I solicit your wholehearted cooperation in our common cause.

Education in the Pulp and Paper Industry

By Robert B. Wolf[1]

Abstract

The Joint Vocational Education Committee of the pulp and paper industry of Canada and the United States has been a major factor in the dissemination of knowledge relative to the industry since its inception twenty-five years ago. The efforts of the Committee insured the publication and subsequent revision in both English and French of the five volume set "The Manufacture of Pulp and Paper" which is widely used as textbook and reference. In addition to this activity, arrangements were made with various educational institutions to offer correspondence courses covering all or part of the varied phases of the paper industry. That these efforts are of great value is evidenced by the fact that even in these war years, there is a sustained interest in the educational program.

Twenty-five years ago at a meeting of the Technical Association of the Pulp and Paper Industry held in Buffalo on September 16, 1918, a plan of far reaching significance to the industry in North America was launched. On the date, the Joint Vocational Education Committee of the pulp and paper industry of Canada and the United States was organized and plans for vocational education in this vitally important industry on a continental scale were formulated. This pioneering step in industrial education on such a large scale was the outgrowth of careful study by technical men and executives in both the United States and Canada.

At that time, we were in the midst of World War I. The technical men and the far-seeing executives realized the growing necessity to apply scientific knowledge to the paper industry as it had been applied to other industries, especially those engaged in the production of war materials. The experiences gained in the prosecution of the first world war brought home to every thinking executive the importance which the scientific approach was assuming in our world economy. They saw that we were becoming specialists and that a broad scientific training, valuable as it had been in the past, was inadequate for the rapid technological development taking place in almost every industry.

Following the industrial revolution the tendency had been to emphasize and rely upon the mechanical performance of industrial operations with comparatively little effort being made to stimulate the creative power of the human mind. It was a realization of the neglect in the field of technical training that was the motivating spirit behind the formation of the joint vocational education committee.

Formation of Committee

Prior to the formation of the Joint Committee, there had existed both in the Technical Association of the Pulp and Paper Industry and the Technical Section of the Canadian Pulp and Paper Association, separate vocational education committees who had devoted long and arduous study to the problem of vocational education. Each of these committees, therefore, had a considerable background of experience which was made available to the newly formed Joint Committee. The committee representing TAPPI had personally interviewed many of the foremost mill executives and had obtained assurance of their cooperation in a sound and comprehensive vocational education program. The Technical Section of the Canadian Pulp and Paper Association had a definite promise of support from their parent organization. Of course, neither the individual executives of the mills in the United States nor the Canadian association were ready to offer financial assistance until some definite plan of action had been worked out and an estimate of the size of the task and the financial support necessary had been made.

The new Joint Committee immediately was faced with the necessity of furnishing text books so designed and grouped as to lead the prospective student in a clear and logical manner through the steps of the particular branch of the industry in which he was most interested and at the same time give him the basic scientific foundation upon which the various phases of the industrial operations are based. At that time, there existed in the English language no comprehensive text books dealing with North American practice in the manufacture of pulp and paper. There were textbooks in foreign languages covering many of the technical aspects of pulp and paper manufacture but these texts were written for but a selected few highly trained technical men. The task of the Joint Committee was to prepare authentic textbooks dealing with North American practices which would be available to all of the mill personnel. Such a text had never before been attempted.

Personnel

Fortunately, George Carruthers, who became chairman of the Joint Vocational Education Committee, had had the benefit of a wide experience in correspondence school education and was able to place this experience at the disposal of the newly formed committee. The committee's first task was to select an editor familiar enough with all branches of the industry to supervise the vast amount of editorial work which this project contemplated. Furthermore, it became evident that an experienced educational director would also be needed. As a result of these deliberations, the Joint Vocational Education Committee elected an executive committee whose function was to carry on the active work involved in the preparation of the textbooks through the hiring of an editor and educational director. It was the further duty of the executive committee to see that sufficient funds were raised to start the project on a sound basis. The personnel of this committee consisted of George Carruthers and T. L. Crossley, representing the Canadian Technical Section and George E. Williamson of the Strathmore Paper Company, C. P. Winslow, Director of the Forest Products Laboratory,

[1] Member TAPPI; Manager Pulp Division, Weyerhaeuser Timber Co., Longview, Wash.

and R. S. Kellogg, secretary of the News Print Service Bureau, representing the Technical Association of the Pulp and Paper Industry. Shortly after the formation of this committee, C. P. Winslow was obliged to resign because of the many duties involved in the Forest Products Laboratory and R. S. Hatch was appointed as his successor. This committee functioned intact from the time it was organized until January 1, 1942 when Chairman Carruthers resigned because of his desire to retire from active work in the pulp and paper industry. He was succeeded by George E. Williamson as Chairman of the Joint Committee and Henry S. Spencer of the Howard Smith Paper Mills, a graduate of the Institute of Industrial Arts course on paper-making based upon the published textbooks, was appointed to fill the Canadian vacancy. R. S. Kellogg has acted as secretary-treasurer of the committee since its inception.

Through the efforts of the Joint Committee and of the many interested members, the Canadian Pulp and Paper Association supplied the sum of $26,859 through a series of five annual appropriations. In the United States, the funds contributed were raised by individual subscriptions contributed by some 200 individual pulp and paper mills as well as by manufacturers of pulp and paper mill equipment. The total sum realized in the United States amounted to $30,176.

Textbooks

With the combined contributions of the Canadian Pulp and Paper Association, and the mills and equipment manufacturers of the United States totaling about $57,000, the committee carried through its original program. They selected J. N. Stephenson as Editor. Mr. Stephenson has fully justified the wisdom of his selection through the years that followed. Through T. J. Foster, founder of the International Correspondence Schools as consultant on planning procedure, J. J. Clark, a former dean of the International Correspondence School and Editor of their textbooks, was chosen as educational advisor both for the purpose of formulating the courses and supervising preparation of the textbooks.

As soon as the organization details and the machinery necessary for the preparation of the textbooks and courses had been settled upon, a ten-year contract was entered into with the McGraw-Hill Publishing Company for the publication of the textbooks. Under this agreement, the textbook committee was to receive a standard rate of royalties upon all sales, and at the same time there was made available to the committee the broad experience of the McGraw-Hill organization in the publication of scientific and engineering texts. The ten-year agreement originally entered into with McGraw-Hill has been renewed each time upon expiration and the relationships with this company have been on a most cordial and informal basis with no occasion for argument or misunderstanding as to the spirit of the original contract.

The textbooks finally produced under the able supervision of Editor Stephenson and his associates need little descriptive amplification. These books represent contributions from more than a hundred technical specialists in the various fields of pulp and paper as well as equipment manufacturers and they portray the most modern North American practices. The original publication of these books extended over a period of four years with Volumes I and II, covering elementary mathematics, physics and chemistry, appearing in 1921; Volume III in 1922; Volume IV, in 1924; Volume V in 1925.

No industry remains static and the committee foresaw the necessity of constant revision to make the textbooks of current value as improvements and modifications appear. They, therefore, set aside all the royalties received for the purpose of periodical revision. It has not been necessary to revise Volumes I and II which deal with elementary mathematics, physics, and chemistry. Volumes III, IV and V, however, giving the details of various pulp and paper mill practices have required two revisions so far. The first revision of Volume III was completed in March 1927, that of Volume IV in September 1928, and Volume V in March, 1929. The second revision of these three volumes occurred for Volume III in February 1937, Volume IV February 1938 and Volume V in January 1939. In all cases, the original text and the revisions were submitted to specialists in the different fields covered and critically examined for errors or improvements before they were finally printed and placed on sale.

Not long after the publication of the textbooks, it became apparent that in the Province of Quebec, where French is widely used, it would be necessary to provide a French translation. This was undertaken by the Industrial and Educational Publishing Company in Canada and the cost of the copyright privileges was defrayed by the Provincial Government. Part of the French text was prepared in Canada and part was prepared by the faculty of the pulp and paper school in Grenoble, France. It was necessary to alter some of the French text through insertion of patois terms used in the Canadian mills. This French text has been used both at Grenoble, France, and at the Technical and Paper School at Three Rivers, Quebec.

Correspondence Courses

With the preparation of the textbooks well under way, the committee began to consider ways and means of carrying on an educational program throughout the industry. In Canada the Institute of Industrial Arts, Inc., under the Technical Schools Act of the Province of Quebec was founded at Sainte Anne de Bellevue in the Province of Quebec and in this institute, correspondence courses were organized.

In the United States, the Massachusetts Division of University Extension was sufficiently interested in the project to arrange for handling the complete courses either in class or by correspondence. This course was open to all residents of Massachusetts and was available to residents outside of Massachusetts for a slightly increased cost. International Correspondence Schools were also interested and arranged to give complete courses in the manufacture of pulp, the manufacture of paper, or the manufacture of pulp and paper. The Wisconsin State Board of Education also made arrangements for giving correspondence courses based on the textbooks. In addition to correspondence courses, the University of Maine has used the textbooks in their pulp and paper school. The New York State College of Forestry located at Syracuse in conjunction with Syracuse University also have used the textbooks in their pulp and paper course.

Through the twenty-five year period in which the Joint Committee has been functioning, the interest in the educational program has continued. Some eighteen hundred students have enrolled in the In-

stitute of Industrial Arts course and two hundred have graduated. The State University extension courses which have been mentioned also have found continuing interest on the part of mill employees. It is interesting to note that those who have enrolled for these courses include men varying in age from seventeen to over sixty. The educational background of these men ranges all the way from those who have not completed common school to those who are university graduates.

To aid the educational program a number of mills have established local schools at their mills, some for the purpose of giving the entire course and some for giving unit courses bearing upon their particular interest. Some of these schools have suspended, others are continuing with marked success. Among the most outstanding of the schools operating at a mill site is that conducted by the Crown-Willamette Paper Company at Camas, Washington. This school has been so successful in its educational program that the work of the students taking the pulp and paper course is given university credit both in the State of Washington and in the State of Oregon.

A variety of means have been used to pay for the instruction received by different correspondence and local schools. In some cases the responsibility is entirely that of the individual taking the course. In other cases, the individual advances all, or part, of the cost of the course and this money is refunded by the mill upon completion of the course. The method of handling the cost of the courses is the responsibility of the individual mills. In many cases where technical men have taken the course, they have obtained enough benefit from the instruction to willingly defray the entire cost themselves.

Sales

Probably one of the most significant indications of the continued interest in the educational program of the Pulp and Paper industry is a record of the sale of the textbooks. At the end of June 1943 a total of 36,113 volumes had been sold. In the elementary courses covered by Volumes I and II, 5,062 copies of Volume I have been sold and 4,260 copies of Volume II. A total of 10,899 copies of Volume III have been sold. Volume III is the one which comprises the various pulping processes. Volumes IV and V deal with all phases of the manufacture of paper; 8,517 copies of Volume IV have been sold and 7,375 copies of Volume V.

In spite of the fact that we now are engaged in a war on a far greater scale than the one in progress when this project was initiated, it is interesting to note that in the first half of 1943 a total of 375 volumes of the text books were sold. These are divided as follows: Thirty-nine copies Volume I; 38 copies Volume II; 111 copies Volume III; 84 copies Volume IV; 103 copies Volume V.

Undoubtedly, interest in the educational program is still active even though we are in the midst of a global war. This investment is paying far more "substantial dividends" than mere monetary ones. The firm foundation of factual wealth upon which it is built will enable it to render an ever increasing service to anyone who will take advantage of the opportunities it offers.

New TAPPI Members

The executive committee of the Technical Association of the Pulp and Paper Industry has elected the following to membership:

William F. Allen, paper mill technician, A. E. Staley Manufacturing Company, Decatur, Ill., has been transferred from the associate to the active grade.

Robert E. Armstrong, chief chemist, Hawley Products Company, 333 North 6th street, St. Charles, Ill., a 1925 graduate of the University of Illinois and formerly with Mariner & Hoskins, Chicago, Ill., and Cornstalk Products, Danville, Ill.

Ted M. Danziger, the Institute of Paper Chemistry, Appleton, Wis., a 1942 graduate of the University of North Carolina and formerly with the Ecusta Paper Corporation, Pisgah Forest, N. C.

David H. Dawson, research division head, Pigments Department, E. I. du Pont de Nemours & Co., Newport, Del., a 1933 graduate of Ohio State University.

Thomas B. Dorris, technical director, Franklin Research Company, 5134 Lancaster avenue, Philadelphia, Pa., a 1933 graduate of Notre Dame, with a degree of M. S. in 1934 and Ph.D. in 1936, and formerly assistant professor of chemistry at Manhattan College.

Nathan Flaxman, chief control chemist, Peter J. Schweitzer, Inc., Elizabeth, N. J., a 1942 graduate of Brooklyn College.

Melvin J. Killian, control supervisor, Combined Locks Paper Company, Combined Locks, Wis., a 1933 graduate of the University of Wisconsin.

Lieut. Robert M. Kuhn, Chemical Warfare Service, Edgewood Arsenal, Md., has been reinstated as an associate member.

Charles E. Lanyon, director of research, John A. Manning Paper Company, Inc., Troy, N. Y., a 1924 graduate of Massachusetts Institute of Technology.

Frank Miller, chemist, Peter J. Schweitzer, Inc., Elizabeth, N. J., a 1941 graduate of Brooklyn College, and at present in the U. S. Army.

Pierre Mougeot, clerk and laboratory assistant, James Maclaren Company, Buckingham, P. Q., Canada, a 1936 graduate of the University of Ottawa.

Alan Rhodes, assistant chemical engineer, Northern Regional Research Laboratory, Peoria, Ill., a 1932 graduate of the University of California.

Wayne M. Schrag, student, New York State College of Forestry, Syracuse, N. Y.

Joseph B. Simberg, salesman, A. & P. Corrugated Box, Corporation, Lowell, Mass., and United Container Company, Philadelphia, Pa., attended Suffolk Law School and Boston University.

Substitutes and Synthetics

The philosophical Library has published a 380-page book entitled Encyclopedia of Substitutes and Synthetics, edited by M. D. Schoengold. An attempt is made to indicate what may be used in place of hard to get materials. The physical and chemical properties of the materials is given. Some of the materials mentioned are used to any extent in the paper industry.

Copies may be obtained from the Book Department of the Technical Association of the Pulp and Paper Industry, 122 East 42nd street, New York, N. Y., at $10.00 per copy.

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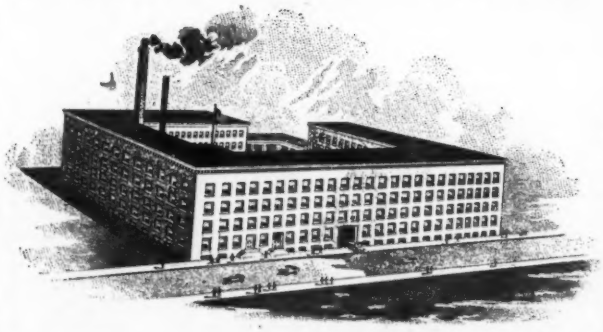

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New York Paper and Pulp Market Review

OPA Sets Definite Ceiling Prices On Paper Shipping Sacks—Pulp wood Control Established In Three More States — Paper Demand Still Heavy — Waste Paper Supply Situation Continues Acute.

Office of the PAPER TRADE JOURNAL.
Wednesday, October 27, 1943.

Orders for major types of paper and paper board continue to rise. Reports received this week from many manufacturers' representatives, jobbers, and general paper merchants, also reflect the opinion that more effort should be made by every person to salvage paper and paper board for repulping.

Maximum prices on paper shipping sacks were established for the first time in a specific order issued by the Office of Price Administration on October 20, 1943. The order MPR-480, sets ceilings at prices prevailing between October 1 and November 30, 1941. Previously, ceilings were those under General Maximum Price Regulation, based on March 1942 prices. According to the order, it will affect the ceiling prices of about 5% of the industry's production by eliminating increases in effect after November, 1941. During the current year 42 concerns in the paper sack industry produced approximately 285,000 tons of bags, valued at about $45,000,000.

Paper production for the week ended October 16 was estimated at 90.5%, compared with 89.8% for 1942, with 194.9% for 1941, with 84.5% for 1940, and with 96.9% for the corresponding week for 1939.

Paper board production for the week ended October 16 was 95.0%, compared with 79.0% for 1942, with 98.0% for 1941, with 78.0% for 1940, and with 84.0% for the corresponding week for 1939.

Wood Pulp

Future wood pulp production may be expanded or curtailed, but some definite indication of the attitude of the WPB may result from the meetings in the Northwest between paper and pulp men and the government agencies being held this week.

The OPA has, for the first time, established price control on pulpwood produced in Indiana, Illinois, and Missouri. Prices dependent upon distance of delivery, range for rough pulpwood, all species, per cord, of from $10.80 to $13.20; peeled, from $14 to $17.20.

New ceiling prices are in effect in Pennsylvania, Maryland, West Virginia, Ohio and Kentucky. Prices are given for five zones. Price per cord, all species, rough, range from $7.60 to $10.80; peeled, $10.80 to $14.

Rags

Mill demand for new colored cuttings is active at ceiling levels. Trading in old cotton rags is active, with mills steadily taking the roofing grades at ceiling prices.

Old Rope and Bagging

No important change has been reported in the old rope market this week. Supplies of No. 1 Manila continue inadequate to meet the steady mill demand to satisfy war requirements.

Old Waste Paper

Although the various salvage drives to collect waste paper have been quite successful, the great need for waste paper increases as the wood pulp supply situation becomes a more serious threat in the future. Many paper and board mills are cooperating in the campaign but a great deal of paper continues to be burned and otherwise wasted.

The paper stock market is active. All grades are in demand and prices are strong at full ceilings.

New Wax by Wishnick-Tumpeer Inc.

To meet the growing shortage of micro-crystalline wax, Wishnick-Tumpeer, Inc., New York, announces the development, in their research laboratories, of Witco Hamp Wax, a new group of waxes for use in the manufacture of ordnance wraps and other military and essential civilian products.

Witco Hamp Wax is a hard amorphous petroleum wax of the greaseproof type, which possesses an exceptionally high resistance to moisture vapor transmission. It has been tested and approved by leading manufacturers of grade C ordnance wrap who are using it successfully.

Several grades of Hamp Wax, to cover a wide range of applications, are now being manufactured at the Wishnick-Tumpeer plant in Chicago. This product is not on allocation and, therefore, may be obtained on application providing orders designate either 100 per cent military or essential civilian use. Its general uses are for waterproofing ends of bags for export shipments and for manufacture of ordnance papers and similar applications where melting point, hardness and other properties of this range are desired.

Witco Hamp Wax should fill a genuine need for an alternate material to micro-crystalline wax which will free increasing quantities of the latter for other essential purposes.

Samples for trial purposes are available by writing Wishnick-Tumpeer, Inc., 295 Madison avenue, New York. Specific use should be indicated to assure proper grade of Hamp Wax for purpose intended.

V. P. Shaffer Goes With H. K. Porter Co.

Victor P. Shaffer has been named engineer in charge of design for the Process Division of H. K. Porter Company, Inc., Pittsburgh, Pa. He will also direct an expanded program of development and research being launched by Porter.

A graduate of University of Colorado, Mr. Shaffer has been associated for the past 10 years with design, development and plant layout work for Calco Chemical Division of American Cyanamid Corporation. He is a member of the American Institute of Chemical Engineers.

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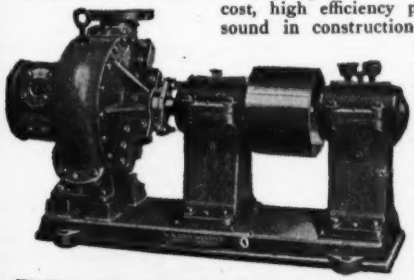
STOCK PUMPS *INDIVIDUALLY DESIGNED* TO MEET YOUR OPERATING CONDITIONS ★

Actually, there is no such thing as a "stock" FREDERICK Stock Pump . . . there is only a basic design. And, when we engineer your pump, we take into account the nature of the stock, its consistency, the piping layout, and all other factors that enter into your operating conditions . . . and build the pump accordingly.

Consequently, FREDERICK pumps can be GUARANTEED to meet the operating conditions for which they are sold!

You'll find a FREDERICK pump is *the* unit for low cost, high efficiency pumping—sound in construction—dependable in operation—proved by over a quarter century's use by leading paper mills.



FREDERICK PUMPS

The FREDERICK IRON & STEEL CO.
Frederick, Maryland

PRICE & PIERCE »»»»»»»ltd•

Wood Pulp & Paper Agents

60 East 42 Street
New York, N. Y.

MISCELLANEOUS MARKETS

Office of the PAPER TRADE JOURNAL.
Wednesday, October 27, 1943.

BLANC FIXE—The market for blanc fixe continues to conform to prevailing prices. Demand is reported moderate. The pulp is currently quoted at $40 per ton, in barrels, at works; the powder is currently quoted at $60 per ton.

BLEACHING POWDER—Current demand is reported active. Supply situation satisfactory. Bleaching powder is currently quoted at from $2.50 to $3.10 per 100 pounds. All prices in car lots, in drums, f. o. b. works.

CASEIN—OPA maximum prices on processed acid-precipitated casein are as follows: 10,000 pounds or more, 24 cents per pound; 2,000 pounds, 24¼ cents per pound; less than 2,000 pounds, 24¾ cents per pound, f. o. b. shipping point. Argentine casein, 12 cents per pound, c. & f.

CAUSTIC SODA—Supply situation tighter, as demand for dry caustic soda is reported in excess of production. Prices continue unchanged. Solid caustic soda is currently quoted at $2.30 per 100 pounds. The flake and ground are currently quoted at $2.70 per 100 pounds. All prices in car lots, in drums, f. o. b. works.

CHINA CLAY—Demand for some grades of china clay is reported fair to moderately good. Domestic filler clay is currently quoted at from $7.50 to $15 per ton; coating clay is quoted at from $12 to $22 per ton, at mines. Imported china clay is currently quoted at from $13 to $25 per long ton, ship side.

CHLORINE—The market situation is reported tight, due to heavier war orders. Production continues steady. Prices continue unchanged. Chlorine is quoted at $1.75 per 100 pounds, in single-unit tank cars, f. o . b. works.

ROSIN—Lower prices are quoted on some grades of rosin this week. "G" gum rosin is currently quoted at $4.01 per 100 pounds, in barrels, Savannah. "FF" wood rosin is currently quoted at $4.01 per 100 pounds, in barrels, New York. Seventy per cent gum rosin is currently offered at $4.20 per 100 pounds, f. o. b. works.

SALT CAKE—Demand continues moderate. Quotations on salt cake continue to be reported unchanged. Domestic salt cake is currently quoted at $15 per ton, in bulk. Chrome cake is currently quoted at $16 per ton.

SODA ASH—Demand for soda ash continues to be reported as heavy. Prices continue to conform to prevailing quotations. Prices on soda ash in car lots, per 100 pounds, are as follows: in bulk, $.90; in paper bags, $1.05; and in barrels, $1.35.

STARCH—More cash corn reported available but delayed by lack of freight cars. Market still tight. Quotations continue unchanged. Pearl is currently quoted at $3.10 per 100 pounds. The powdered grade is currently quoted at $3.20 per 100 pounds. All prices f. o. b. Chicago.

SULPHATE OF ALUMINA—Market situation in sulphate of alumina is reported satisfactory at this date. Quotations continue unchanged. Prices on the commercial grades are quoted at from $1.15 to $1.25 per 100 pounds. The iron free is currently quoted at $2.35 per 100 pounds. All prices in car lots, in bags, f. o. b. works.

SULPHUR—Demand is reported steady for sulphur. Quotations on all grades continue unchanged. Annual contracts are currently quoted at $16 per long ton, f. o. b. mines. The current contract price at Gulf Ports remains unchanged at $17.50 per long ton.

TALC—Demand is reported moderate on some grades of domestic talc at this date. The domestic grades are currently quoted at from $16 to $21 per ton, at mines.

MARKET QUOTATIONS

All market quotations, excepting those otherwise designated as official OPA maximum prices, are based on the manufacturers' price level as of October 1-15, 1941; maximum wholesale prices are based on the merchants' maximum prices for stipulated quantities at a quoted price to all customers of a like class, as shown by the merchant's sales records of goods delivered during March, 1942. A merchant's price list in effect in March 1942, showing quotations of actual shipments, will establish the current maximum prices.

Paper

(Delivered New York)

News, per ton—			
Roll, contract	*$58.00	@	—
Sheets	64.00	"	—
* OPA Maximum Price.			
Kraft—per cwt.—Carload Quantities Zone A, f.o.b. Mill			
Superstandard Wrapping	*$5.25	@	—
No. 1 Wrapping	*5.00	"	—
Standard Wrapping	*4.75	"	—
Standard Bag	*4.375	"	—
* OPA Manufacturers' Prices.			
Tissues—Per Ream—Carlots			
White No. 1	1.12½	"	—
White No. 1 M. G.	1.10	"	—
White No. 1½	1.00	"	—
White No. 2	.90	"	—
Anti-Tarnish M.F.	1.20	"	—
Colored	—	"	—
Kraft	.95	"	—
Manila	.90	"	—
Toilet—1 M. Sheets—Per Case			
Unbleached	4.25	"	—
Bleached	5.70	"	—
Unbl. Toilet, 1 M.	4.16	"	—
Bleached Toilet	5.70	"	—
Paper Towels, Per Case—			
Unbleached, Jr.	2.60	"	—
Bleached, Jr.	3.20	"	—
Manila—per cwt.—C. l. f. a.			
No. 1 Jute	11.25	@	—
No. 1 Manila Wrapping, 35 lb.	6.00	"	6.25
No. 2 Manila Wrapping, 35 lb.	5.75	"	6.00
Boards, per ton—			
News	*48.00	@	—
Chip	*45.00	"	—
Sgl. Mla. Lt. Chip	*60.00	"	—
White Pat. Coated	*75.00	"	—
Kraft Liners 50 lb.	*63.00	"	—
Binders Boards	84.00	"	116.00

* OPA Base Prices per 10 tons. Less than 10 tons but over 3 tons, add $2.50; three tons or less, add $5; regular 35-39 basis, add $5.; basis 40-49, add $2.50; basis 91-100, add $2.50; basis 101-120, add $5.

The following are representative of distributors' resale prices:

Rag Content Bonds and Ledgers—White, Assorted Items, Delivered in Zone 1:

	Bonds	Ledgers
100% Rag Ext. No. 1	$39.10@$46.00	$40.25@$47.25
100% Rag	32.20 " 37.75	33.35 " 39.25
85% Rag	.... "	29.90 " 35.00
75% Rag	23.00 " 27.00	24.15 " 28.25
65% Rag	.... "	22.80 " 27.75
50% Rag	18.70 " 22.75	19.90 " 24.25
25% Rag	16.40 " 20.00	17.55 " 21.50

Colors at $1.00 cwt. extra.

Sulphite Bonds and Ledgers—White, Assorted Items. Delivered in Zone 1:

	Bonds	Ledgers
No. 1..	$10.55@$12.75	$11.70@$14.25
No. 2..	9.65 " 11.75	10.80 " 13.25
No. 3..	9.20 " 11.25	10.35 " 12.50
No. 4..	8.90 " 10.75	10.05 " 12.25

Colors $1.00 cwt. extra.

Free Sheet Book Papers—White, Cased Paper, Delivered in Zone 1:

No. 1 Glossy Coated	$13.65	@	$15.30
No. 2 Glossy Coated	12.40	"	14.00
No. 3 Glossy Coated	11.60	"	13.25
No. 4 Glossy Coated	11.15	"	12.75
No. 1 Antique (watermarked)	10.25	"	11.75
No. 2 Offset	9.60	"	11.00
A Grade E. F.	9.35	"	10.75
A Grade S. & S. C.	9.60	"	11.00
B Grade E. F.	8.85	"	10.25
B Grade S. & S. C.	9.10	"	10.50
C Grade E. F.	8.55	"	9.75
C Grade S. & S. C.	8.80	"	10.00
D Grade E. F.	8.25	"	9.50
D Grade S. & S. C.	8.50	"	9.75

Ivory & India at $.50 cwt. extra.

Wood Pulp

OPA Maximum Prices and Canadian Manufacturers Prices, Less Freight, Not Exceeding OPA Allowances.

Bl. Softwood Sulphite	$76.00		
Unbl. Softwood Sulphite	65.00	@	66.00
Bl. Hardwood Sulphite	73.50		
Unbl. Hardwood Sulphite	63.50		
Bl. Mitscherlich	81.00		
Unbl. Mitscherlich	72.00	@	82.00
N. Bleached Sulphate	86.00		
S. Bleached Sulphate	79.00		
N. Semi-Bleached Sulphate	82.00		
S. Semi-Bleached Sulphate	75.00		
N. Unbl. Sulphate	73.00		
S. Unbl. Sulphate	63.50		
Bl. Soda	66.00		
Unbl. Soda	62.00		
Groundwood	46.00		

Transportation Allowances Applying to Producers of Wet Wood Pulp.

	Below 50% Air Dry Weight
Northeast	$13.50
Lake Central	13.50
Southern	16.00
West Coast (in area)	10.50
West Coast (out area)	16.50

	50%-80% Air Dry Weight
Northeast	$11.50
Lake Central	11.50
Southern	14.00
West Coast (in area)	9.50
West Coast (out area)	15.50

Applying to Producers of Dry Wood Pulp.

	Above 80% Air Dry Weight
Northeast	$8.50
Lake Central	8.50
Southern	11.00
West Coast (in area)	7.50
West Coast (out area)	13.50

Should freight charges actpally exceed these allowances, the difference may be added to the maximum prices.

Domestic Rags

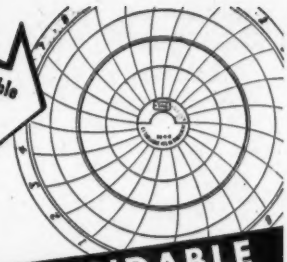
New Rags

(Prices to Mill f. o. b. N. Y.)

Shirt Cuttings—			
New White, No. 1	6.50	@	7.25*
Silesias No. 1	—	"	5.75*
New Unbleached	6.75	"	7.50*
Blue Overall	—	"	5.50*
Fancy	—	"	3.50*
Washables	—	"	3.00*
Bleached Khaki Cuttings	—	"	4.25*
Unbleached Khaki Cuttings	—	"	3.50*

* OPA Maximum Prices.

Control within negligible limits of variation



Valves built to meet exacting requirements in the control of steam, liquids and air. Types, sizes and construction for specific requirements and conditions in wide field of application.

ACCURATE, DEPENDABLE PRESSURE REGULATION

Stickle Standard Regulating Valve. Double seated, semi-balanced. All working parts renewable. Seven sizes—½" to 6".

Stickle Single Seated, Balanced Valve. Internal parts interchangeable. May be repaired at point of service. Eight sizes—½" to 4".

Stickle Spring Balanced Valve. Diaphragm case detachable. Renewable valve and seat. ½", ¾" and 1" sizes for individual installations on small equipment.

Stickle Standard Back Pressure Release Valve—double seated, unbalanced type. Designed to meet various operating pressures. Ten sizes—3" to 16".

LONG LIFE

STICKLE VALVES

REDUCING . . . REGULATING

Stickle Series 400 Valves—single seated with pilot stem—illustrated and described in Bulletin No. 435, and Stickle Series 300 Double Seated Valves, illustrated and described in Bulletin No. 235 are available in three constructions: Lever Operated; Lever and Weight Loaded, Diaphragm Operated; and Spring Loaded Diaphragm Operated. Self-contained and Pilot Operated. Proved by long use in fields where dependability and accuracy are required. Ask for Bulletins.

STICKLE STEAM SPECIALTIES CO., 2245 Valley Ave., Indianapolis, Ind.

Idea Starters...

PQ SILICATES

Perhaps silicate of soda is known to you as a size in the beater, or maybe as a deflocculating agent for clays. Whether your familiarity is limited to these, or whether silicate is now used in some other way in your plant, you'll find our bulletin "Brands, Properties, Applications — PQ Silicates" stimulating. Ask for a copy.

Meantime, current developments in using silicate of soda in the paper industry as recorded in patents may suggest to you other services for silicates.

Washable Wall Paper: A coating mixture of soy bean flour dispersed in water, plus ammonia, pine oil, soap, kaolin, tinting pigment and silicate of soda.

Bonding Metal Foil to Paper: Clean foil is immersed in hot water for a few minutes or heated to 100°-200°C. to remove film of gas. A silicate film then applied which permits bonding to paper with a gentle pressure.

SILICATES OF SODA

PHILADELPHIA QUARTZ CO.

Gen'l Off.: 125 S. 3rd St., Phila. 6, Pa.
Chicago SalesOff.: 205 W. Wacker Dr.
9 Mfg. Plants · Distributors in 65 cities

Old Rags

White, No. 1—			
Repacked	*3.80	"	—
Miscellaneous	*3.20	"	—
White, No. 2—			
Repacked	*2.90	"	—
Miscellaneous	*2.65	"	—
Third and Blues—			
Repacked	*2.20	"	—
Miscellaneous	*1.80	"	—
Roofing Rags—			
No. 1	*1.55	"	—
No. 2	*1.45	"	—
No. 3 (bagging)	*1.35	"	—
No. 4	*1.35	"	—
No. 5A	*1.35	"	—
Old Manila Rope	5.75	"	—

OPA Maximum Prices.

Foreign Rags

All Prices nominal

New Rags

New Dark Cuttings	2.25	@	2.40
New Mixed Cuttings	2.00	"	2.20
New Light Silesias	5.50	"	5.75
Light Flannelettes	5.50	"	5.75
New White Cuttings	7.00	"	7.50
New Light Oxfords	4.00	"	4.50
New Light Prints	3.00	"	3.25

Old Rags

No. 1 White Linens	7.50	"	8.50
No. 2 White Linens	6.50	"	7.50
No. 3 White Linens	4.50	"	—
No. 4 White Linens	2.25	"	3.25
No. 1 White Cotton	4.25	"	4.75
No. 2 White Cotton	3.25	"	3.75
No. 3 White Cotton	2.50	"	3.00
No. 4 White Cotton	1.90	"	2.20
Extra Light Prints	2.00	"	2.40
Ord. Light Prints	1.75	"	2.15
Med. Light Prints	1.55	"	1.95
Dutch Blue Cottons	2.25	"	2.50
French Blue Linens	3.00	"	—
Checks and Blues	2.00	"	—
Linsey Garments	1.90	"	2.00
Dark Cottons	1.50	"	1.60
Old Shopperies	1.30	"	1.45
New Shopperies	1.45	"	1.50
French Blues	2.25	"	2.50

BAGGING

(Prices to Mill, f. o. b. N. Y.)

Gunny No. 1—			
Foreign	Nominal		
Domestic	4.25	@	4.35
Wool Tares, light	4.25	"	4.50
Wool Tares heavy	4.50	"	5.00
Bright Bagging	4.50	"	4.85
Manila Rope—			
Foreign	—	"	—
Domestic	*5.75	"	—
Jute Threads	5.50	"	—
No. 1 Sisal Strings	*4.00	"	—
Mixed Strings	2.00	"	—

* OPA Maximum Price.

Old Waste Papers

(F. o. b. New York)

OPA Maximum Prices

No. 1 Hard White Envelope Cuts, one cut	3.37½	@	—
No. 1 Hard White Envelope Cuts	3.12½	"	—
No. 1 Hard White Shavings, unruled	2.87½	"	—
No. 1 Hard White Shavings, ruled	2.50	"	—
Soft White Shavings, one cut	2.87½	"	—
No. 1 Soft White Shavings	2.50	"	—
Soft White Shavings, Misc.	2.15	"	—
No. 1 Fly Leaf Shavings	1.67½	"	—
No. 2 Fly Leaf Shavings	1.12½	"	—
No. 1 Groundwood Fly Leaf Shavings	1.25	"	—
No. 2 Mixed Groundwood Fly Leaf Shavings	.90	"	—
Mixed Colored Shavings	.75	"	—
Mixed Groundwood Colored Shavings	.90	"	—
Overissue Magazines	1.67½	"	—
No. 1 Heavy Books & Magazines	1.67½	"	—
Mixed Books	.85	"	—
No. 1 White Ledger	2.17½	"	—
No. 2 Mixed Ledger, colored	1.87½	"	—
New Manila Envelope Cuttings, one cut	2.87½	"	—
New Manila Envelope Cuttings	2.65	"	—
Extra Manilas	1.85	"	—
Mixed Kraft, Env. & Bag Cuttings	2.75	"	—
Kraft Envelope Cuttings	3.25	"	—
Triple Sorted, No. 1 Brown Soft Kraft	2.50	"	—
New 100% Kraft Corrugated Cuttings	2.25	"	—
No. 1 Assorted Old Kraft	1.75	"	—
New Jute Corrugated Cuttings	.90	"	—
Old 100% Kraft Corrugated Containers	1.75	"	—
Old Corrugated Containers	1.15	"	—
Box Board Cuttings	.72½	"	—
White Blank News	1.65	"	—
Overissue News	.85	"	—
No. 1 News	.75	"	—
No. 1 Mixed Paper	.70	"	—
Old Corrugated Containers	.82½	"	—
Mill Wrappers	.85	"	—

Twines

(F. o. b. Mill)

(Soft Fiber)

Coarse Polished—			
India	.21	@	—
White Hemp	.21	"	—
Fine Polished—			
Fine India	.26	"	—
Unpolished—			
Box	.17½	"	—
Paper Makers	.17	"	—
Tube Rope	.19	"	—
Wall Paper	.20½	"	—
Wrapping	.21	"	—
Soft Fiber Rope	.19	"	—
Cotton	.25	"	—
(Hard Fiber)			
Medium Java	.18	"	—
Mex. Sisal	.16	"	—
Manila		"	—

PHILADELPHIA

Domestic Rags (New)

(Price to Mill, f. o. b. Phila.)

Shirt Cuttings—			
New White No. 1	.07½	@	.07½
New White No. 2	.04½	"	.05
Light Silesias	.04½	"	.04¾
Silesias, No. 1	.04	"	.04¼
Black Silesias, soft	.03¾	"	.04
New Unbleached	.07¼	"	.07½
Washable Prints	.03¾	"	.03½
Washable No. 1	.02	"	.02¼
Blue Overall	.04½	"	.05½
Cottons—According to grades—			
Washable shredding	—	"	.01¾
Fancy Percales	.03¾	"	.03½
New Black Soft	.02¾	"	.03
New Dark Seconds	1.75	"	2.00
Khaki Cuttings—			
No. 1 O. D.	.03	"	.03¼
No. 2 Mixed	.02¼	"	.02½
Corduroy	.01¾	"	.02¼
New Canvas	.04¾	"	.05½
New Black Mixed	—	"	.02½

Domestic Rags (Old)

White No. 1—Repacked	3.20	"	—
White No. 2—Repacked	2.90	"	—
Miscellaneous No. 1	3.20	"	—
Miscellaneous No. 2	2.65	"	—
Thirds and Blues—			
Miscellaneous	1.80	"	—
Repacked	2.20	"	—
Black Stockings—			
(Export)	Nominal		
Roofing Stock—			
Foreign No. 1	Nominal		
Domestic No. 1	1.55	"	—
Domestic No. 2	1.45	"	—
Roofing Bagging	1.35	"	—
Old Manila Rope	5.75	"	—

Bagging

(F. o. b. Phila.)

Gunny No. 1—			
Foreign	Nominal		
Domestic	3.00	"	3.50
Sisal Rope	3.75	"	—
Mixed	1.00	"	1.50
Scrap—			
No. 1	3.25	"	3.50
No. 2	1.75	"	1.80
Wool Tares	4.00	"	4.25
No. 1 New Light Burlap	3.00	"	4.00
New Burlap Cuttings	3.75	"	4.00

Old Papers

(F. o. b. Phila)

OPA Maximum Prices

No. 1 Hard White Envelope Cuts, one cut	3.37½	"	—
No. 1 Hard White Shavings, unruled	2.87½	"	—
Soft White Shavings, one cut	2.50	"	—
White Blank News	1.65	"	—
Soft White Shavings, Misc.	2.13	"	—
No. 1 White Ledger	2.17½	"	—
No. 2 Ledger, colored	1.87½	"	—
No. 1 Heavy Books & Magazines	1.67½	"	—
Overissue Magazines	1.67½	"	—
New Manila Envelope Cuttings	2.65	"	—
No. 1 Assorted Old Kraft	1.75	"	—
No. 1 Mixed Paper	.70	"	—
Box Board Cuttings	.72½	"	—
Ksaft Corrugated Cuttings	2.25	"	—
Old Corrugated Containers	1.15	"	—
Overissue News	.85	"	—
No. 1 News	1.00	"	—

BOSTON

Old Papers

(F. o. b. Boston)

OPA Maximum Prices

No. 1 Hard White Shavings, unruled	2.87½	@	—
No. 1 Hard White Shavings, ruled	2.50	"	—
Soft White Shavings, Misc.	2.15	"	—
No. 1 Fly Leaf Shavings	1.67½	"	—
No. 2 Fly Leaf Shavings	1.12½	"	—
No. 1 Groundwood Fly Leaf Shavings	1.25	"	—
No. 2 Groundwood Fly Leaf Shavings	.90	"	—
Mixed Colored Shavings	.75	"	—
New Manila Envelope Cuts, one cut	2.87½	"	—
Hard White Envelope Cuts, one cut	3.37½	"	—
Triple Sorted No. 1 Brown Soft Kraft	2.50	"	—
Mixed Kraft Env. & Bag Cuttings	2.75	"	—
Kraft Envelope Cuttings	3.25	"	—
No. 1 Heavy Books & Magazines	1.67½	"	—
New Manila Envelope Cuts, one cut	2.87½	"	—
New Manila Envelope Cuttings	2.65	"	—
White Blank News	1.65	"	—
No. 1 Assorted Old Kraft	1.75	"	—
No. 1 Mixed Paper	.70	"	—
Overissue News	.85	"	—
Box Board Cuttings	.72½	"	—
New Corrugated Cuttings, Kraft	2.25	"	—
Old 100% Kraft Corrugated Containers	1.75	"	—
Old Corrugated Containers	1.15	"	—
Jute Corrugated Cuttings	1.07½	"	—

Bagging

(F. o. b. Boston)

Gunny Bagging—			
Foreign	(nominal)		
Domestic	2.50	@	2.75
Sisal Rope No. 1	*4.75	"	—
Sisal Rope No. 2	*4.25	"	—
Mixed Rope	1.35	"	1.50
Transmission Rope—			
Foreign	(nominal)		
Domestic	2.75	"	3.00
Manila Rope—			
Foreign	(nominal)		
Domestic	5.75	"	
Soft Jute Rope	4.50	"	5.00
Jute Carpet Threads	3.00	"	3.50
Bleachery Burlap	8.50	"	9.00
Scrap Burlap—			
Foreign	(nominal)		
Domestic	2.25	"	2.50
Wool Tares—			
Foreign	(nominal)		
Domestic	4.25	"	
Aust. Wool Pouches	4.00	"	4.25
New Burlap Cuttings	4.75	"	5.00
Heavy Baling Bagging	4.00	"	4.25
Paper Mill Bagging	2.50	"	3.00
No. 2 Bagging	1.35	"	—

* OPA Maximum Price.

Domestic Rags (New)

(F. o. b. Boston)

Shirt Cuttings—			
New Light Prints	.04½	@	.04¾
Fancy Percales	.04¼	"	.05
New White No 1	.06¾	"	.07
New Light Flannelettes	.05½	"	.06
Canton Flannels, Bleached	.06	"	.06¼
Underwear Cutters, Bleached	.06¼	"	.06¾
Underwear Cutters, Unbleached	.05¾	"	.06
Silesias No. 1	.06	"	.06¾
New Black Silesias	.03	"	.03¼
Red Cotton Cuttings	.03½	"	.04
Soft Unbleached	.06½	"	.06¾
Blue Cheviots	.05½	"	.06
Fancy	.02¾	"	—
Washable	.02¾	"	—
Khaki Cuttings	.02¾	"	.03
O. D. Khaki	.03½	"	.03¾
Corduroy	.03¼	"	.03½
New Canvas	.06¼	"	.06¾
B. V. D. Cuttings	.06¼	"	.06¾

Domestic Rags (Old)

(F. o. b. Boston)

White No. 1—Repacked	3.80	@	—
Miscellaneous	3.20	"	—
White No. 2—Miscellaneous	2.65	"	—
Twos and Blues, Repacked	2.20	"	—
Old Blue Overalls	2.25	"	2.50
Thirds and Blues, Repacked	2.20	"	—
Miscellaneous	1.80	"	—
Black Stockings	3.50	"	4.00
Roofing Stock—			
No. 1	1.55	"	—
No. 2	1.45	"	—
No. 3	1.35	"	—
No. 4	1.35	"	—
No. 5, Quality A	1.35	"	—
Quality B	1.20	"	—
Quality C	.95	"	—
Old Manila Rope	5.75	"	—

* OPA Maximum Prices

Foreign Rags

(F. o. b Boston)

Canvas	(nominal)
Dark Cottons	(nominal)
Dutch Blues	(nominal)
New Checks and Blues	(nominal)
Old Fustians	(nominal)
Old Linsey Garments	(nominal)
New Silesias	(nominal)

CHICAGO

Waste Paper

(F. o. b. Chicago)

OPA Maximum Prices.

Shavings—			
No. 1 Hard White Envelope Cuts, one cut	3.27½	"	—
No. 1 Hard White Shavings, unruled	2.87½	"	—
No. 1 Soft White Shavings	2.37½	"	—
No. 1 White Ledger	2.17½	"	—
No. 1 Heavy Books & Magazines	1.67½	"	—
White Blank News	1.65	"	—
Mixed Kraft Env. & Bag Cuttings	2.75	"	—
No. 1 Assorted Old Kraft	1.75	"	—
Overissue News	.85	"	—
No. 1 News	.75	"	—
No. 1 Mixed Paper	.70	"	—
No. 1 Roofing Rags	1.55	"	—
No. 1 Roofing Bags	1.45	"	—